



Dart Hawkesbury  
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada  
Tel (613) 632-5200  
Fax 613 632-5246

Print

# Purchasing Receipts

PO No	Supplier	Line No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
P0040517	ACI001-VC	2	1	Net 30	MT-A513-T-0.750W0.085	A513 Seamless Alloy Steel Round Tubing 0.75" dia. x 0.085" Wall				120	7/31/2018	132		S098038	Stock	7/31/2018	\$ 4.65 / ft	7		\$811.48	Acier Ouellette Inc.
		8			M1018R4.000	MATERIAL: AISI 1018-1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108 receive ft				2		2		S098040	Stock	7/31/2018	\$ 71.62 / ft	7		\$143.24	Acier Ouellette Inc.
		9			M1018R2.750	M1018R2.750 : MATERIAL: AISI 1018-1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108				6		6		S098041	Stock	7/31/2018	\$ 29.12 / ft	7		\$174.69	Acier Ouellette Inc.
		10			M303R2.500	303 Round Bar 2.5" : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE:304/316 NOT ACCEPTABLE receive ft				4		4		S098042	Stock	7/31/2018	\$ 20.50 / ft	7		\$82.00	Acier Ouellette Inc.
		11			M304S11GA	304/316 0.125 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240				32		32		S098678	Stock	7/31/2018	\$ 15.54 / sf	7		\$497.20	Acier Ouellette Inc.
		12			M5052H32S.040	5052-H32 .040 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf						32		S099478	Stock	7/31/2018	\$ 4.14 / sf	7		\$132.59	Acier Ouellette Inc.
		13			M6061T6R1.250	6061-T6 Round Bar 1.250 : MATERIAL: 6061-T6/T651/T65107/T651/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft				20		20		S098043	Stock	7/31/2018	\$ 4.99 / ft	7		\$99.70	Acier Ouellette Inc.

PO No	Supplier Name	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name	
		14			MT-1144-R0.750	1144 Steel Proof Round Bar 0.750" : MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440				24		22		S098044	Stock	7/31/2018	\$ 3.12 / ft	7			\$68.64	Acier Ouellette Inc.
		15			M6061T6B1.000X02.000	6061-T6 Bar 1.00 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft				20		20		S098045	Stock	7/31/2018	\$ 8.30 / ft	7			\$166.06	Acier Ouellette Inc.
		16			M6061T6B0.375X0.750	6061T6 Bar .375 X .750 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft						20		S098046	Stock	7/31/2018	\$ 1.29 / ft	7			\$25.76	Acier Ouellette Inc.
		17			M6061T6B0.500X02.000	6061-T6 Bar .500 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft						20		S098047	Stock	7/31/2018	\$ 4.15 / ft	7			\$82.96	Acier Ouellette Inc.
		18			M6061T6B0.750X02.000	6061-T6 Bar .750 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft						20		S098048	Stock	7/31/2018	\$ 6.29 / ft	7			\$125.79	Acier Ouellette Inc.

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
		19			M6061T6S.040	6061-T6 Bar 3.00 X 1.50 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft				12		12		S098049	Stock	7/31/2018	\$ 18.04 / ft	7		\$216.52	Acier Ouellette Inc.
		20			M6061T6S.040	6061-T6 .040 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 receive sf				144		96		S099479	Stock	7/31/2018	\$ 8.51 / sf	7		\$816.67	Acier Ouellette Inc.
		21			M6061T6S.080	6061-T6 .080 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209 receive sf				96		288		S099480	Stock	7/31/2018	\$ 9.70 / sf	7		\$2,793.00	Acier Ouellette Inc.
										<b>Total:</b>		<b>572</b>								<b>\$4,655.12</b>	

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ACIER OUELLETTE INC.

935, Boul. du H vre  
Salaberry de Valleyfield (Qu bec) J6S 5L1  
T l.: 450-377-4248 M l: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 M l: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT

CO00100897

<b>Billed to</b>	<b>Shipped to</b>	<b>Customer N�</b>
DART AEROSPACE LTD	DART AEROSPACE LTD	CLI0001056
1270 , ABERDEEN ST.		2018/07/18
HAWKESBURY, Ontario, K6A 1K7	, Ontario,	<b>2018/07/31</b>
	Att : CHANTAL LAVOIE T�l.: 613-632-5200	040517
	<b>Delivery Route</b> 5	Eric Kaehlert
<b>Instruction</b> F-M		<b>Salesman</b>
		<b>Carrier</b> OUELLETTE VALLEYFIELD
		<b>Credit Terme</b> Net 30 Days

Product Description	Weight	Qty	UM	PCS NB			Internal Use Only			
				CMD	EXP	B/O	IN	I	S	OUT
<b>1 TUBE MEC 0.750 OD X .083 NS</b> TME-0750083 10058 6 X 20' R/L ** CERTIFICATE **  LINE# 2 HEAT : 15C1472 AT HEAT : A372490 AT	70.92	120.00	PI_\$PI							
AC18287-MM-2018-07-23										
<b>2 PLATE 44W 3/16 RANDOM</b> P44-316-V 4105 SHEAR CUT 1 X 4' X 4' ** CERTIFICATE **  HT# A8D110 / B8E587	122.40	16.00	PI2_\$CLB							
		1.00	UN							
LINE# 4										
<b>3 ROUND CR 4 1018 (R)</b> RCR-4 5344 SAW CUT 1 X 2' ** CERTIFICATE **  HT# 142769 LINE# 8	85.44	2.00	PI_\$CLB							
		1.00	UN							



# DELIVERY - CLIENT

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Product Description	Qty	Weight	UM	PCS NB			Internal Use Only					
				CMD	EXP	B/O	IN	I	S	C	OUT	
4 ROUND CR 2 3/4 1018 (R) RCR-234 5310 TRANSFERT ST-JEROME 30-07 SAW CUT 1 X 6' ** CERTIFICATE ** HT# 139335 LINE# 9	121.14	6.00	PI_\$CLB		1x6							
5 ROUND SS 2 1/2 303 NS RSS-212303 11420 1 X 4' ** CERTIFICATE ** HT# 45264 LINE# 10	66.76	4.00	PI		4'							
6 SHEET SS 11G SS304-2B (4 X 8) FESS-11G483042B 3402 PALLET 1 X 4' X 8' ** CERTIFICATE ** HT# 648C LINE# 11	168.00	32.00	PI2_\$CLB		4'x8'							
7 ALU SHEET .040 (18G) 5052-H32 (4 X 8) FEAL-040485052 3124 1 X 4' X 8' PVC 1 SIDE ** CERTIFICATE ** HT# GFB1803W50097 LINE# 12	18.02	32.00	PI2_\$CLB		4'x8'							
8 ROUND ALU 1 1/4 6061-T6 * RAL-114 5121 1 X 20' ** CERTIFICATE ** HT# SXFI62069	28.82	20.00	PI_\$CLB		20'							



# DELIVERY - CLIENT

CO00100897

Product Description	Qty	Weight	UM	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
LINE# 13 9 FLAT ALU 1 X 2 6061-T6 * FAL-12 2497 1 X 20' ** CERTIFICATE ** LINE# 15 Heat: SXF171892 AT	48.00	20.00	PI_\$CLB		20						
10 FLAT ALU 3/8 X 3/4 6061-T6 * FAL-3834 2620 1 X 20' ** CERTIFICATE ** LINE# 16 Heat: HK147-197 M	6.62	20.00	PI_\$CLB		20						
11 FLAT ALU 1/2 X 2 6061-T6 * FAL-122 2481 1 X 20' ** CERTIFICATE ** LINE# 17 Heat: SYE180043 AT	23.98	20.00	PI_\$CLB		20						
12 FLAT ALU 3/4 X 2 6061-T6 * FAL-342 2592 1 X 20' ** CERTIFICATE ** LINE# 18 Heat: CN1714144 AT	36.36	20.00	PI_\$CLB		20						
13 FLAT ALU 1 1/2 X 3 6061-T6 * FAL-1123 2445 1 X 12' ** CERTIFICATE ** LINE# 19 Heat: SYE180264 AT	63.50	12.00	PI_\$CLB		12						
14 ALU SHEET .040 (18G) 6061-T6 RANDOM FEAL-0406061-V 3131 2 X 4' X 12' PVC 1 SIDE ** CERTIFICATE ** LOT# Heat: D260494 M LINE# 20	54.05	96.00	PI2_\$CLB								

4' x 12' PVC 1 SIDE  
Random



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CO00100897

Product Description	Qty	Weight	UM	PCS NB			Internal Use Only			
				CMD	EXP	B/O	IN	I	S	C
AC18289-SA-2018-07-26 <b>15 ALU SHEET .081 (12G) 6061-T6 RANDOM</b> FEAL-0816061-V 3205 6 X 4' X 12' PVC 1 SIDE ** CERTIFICATE **  LOT# HEAT: D358925 HEAT: D311714  LINE# 21	328.61	288.00	PI2_\$CLB							
AC18289-SA-2018-07-26 <b>16 ROUND STRESSPROOF 3/4 (R)</b> RST-34 5815 1 X 20' ** CERTIFICATE **  HT# C124677  LINE# 14	30.00	20.00	PL_\$CLB							

NIR : R-109516-6

Total Weight (Lbs) : 1 272.62

## Conditions :

All sold and delivered materials remain the property of "Acier Quellerie Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Quellerie Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Quellerie Inc." to the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to a 25% restocking charge.

Prepared By :	Verified By :	Delivered By :	Time
Customer's Signature			Date
			Y M D



PURCHASE ORDER  
PO040517

Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200



## Supplier:

AC1001-VC  
Actier Ouellette Inc.  
935 Boul. Du Havre  
Valleyfield  
QC  
J6S 5L1 Canada  
Phone: 800 667 4248  
Fax: 450 377 5696  
1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

## Ship To:

1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

PO No: PO040517  
PO Date: 7/17/18  
Due Date: 7/24/18  
Purchase Order  
Revision:  
Revision Date:

Ship-To Contact:  
Lavoie, Chantal  
Phone: clavoie@dartaero.com

Via:  
Ground  
Net 30  
Pymt Terms:  
Freight Terms:

Special Comments: quotation no sou0119261

REVISED  
\$

Line	Item	Job	Part	Supplier	Part No	Description	Status	Account	Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	MT-A513-T-3.750W0.125					ASTM A513 TYPE 5 (1020/1026) ALLOY STEEL ROUND TUBING	Firmed		7/24/18	6 ft	0 ft	6 ft	\$120.30/ft	\$721.80
2	MT-A513-T-0.750W0.085					A513 Seamless Alloy Steel Round Tubing 0.75"dia, x 0.085" Wall	Firmed		7/24/18	120 ft	0 ft	120 ft	\$4.65/ft	\$558.00
3	MT-A513-T-0.750W0.058					A513 Seamless Alloy Steel Round Tubing 0.75"dia, x 0.058" Wall	Firmed		7/31/18	40 ft	0 ft	40 ft	\$10.90/ft	\$436.00
4	MT-HRS-S-6GA					Hot Rolled Steel Sheet 6 Gauge 0.1943" TUBING (DOM) ALLOY STEEL ROUND (1020/1026) SEAMLESS : ASTM A513 TYPE 5 0.75"dia, x 0.058" Wall	Firmed		7/24/18	16 sf	0 sf	16 sf	\$7.36625/sf	\$117.86
5	MT-4140-B-2.000X4.000					Steel Bar	Firmed		7/31/18	4 ft	0 ft	4 ft	\$82.5425/ft	\$330.17
6	MT-4140-B-0.500X4.000					4140 Steel Bar 0.500 X 4.000 : AISI 4140 STEEL BAR PER ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S-5626 MINIMUM ROCKWELL C = 28 RC MAXIMUM ROCKWELL C = 32 RC	Firmed		7/24/18	4 ft	0 ft	4 ft	\$31.01/ft	\$124.04
7	MT-4140-S-0.500					AISI 4140 Steel Sheet receive ft : AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 RC MAXIMUM ROCKWELL C = 32 RC ASTM A829, AMS 6395	Firmed		7/24/18	11.111 sf	0 sf	11 sf	\$80.34218/sf	\$892.68

Line Item Note 1 pcs of 40" x 40"

Line Item Note 1 pcs of 4 ft x 4 ft



## PURCHASE ORDER

7/18/2018

## Items

Line	Item	Job	Part	Supplier	Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
8	M1018R4.000					M1018R4.000 1025 ROUND BAR MATERIAL: AISI 1018- MIL-S-7097 OR ASTM A108 receive ft	Firmed	-	7/20/18	2 ft	0 ft		\$143.24	
9	M1018R2.750					M1018R2.750 1025 ROUND BAR MATERIAL: AISI 1018- MIL-S-7097 OR ASTM A108	Firmed	-	7/24/18	6 ft	0 ft		\$29.115/ft	\$174.69
10	M303R2.500					303 Round Bar 2.5" MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE: 304/316 NOT ACCEPTABLE receive ft	Firmed	-	7/24/18	4 ft	0 ft		\$20.50/ft	\$82.00
11	M304S11GA					304/316 0.125 Sheet MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR ASTM 5524 (316) OR ASTM A240 OR ASME SA240	Firmed	-	7/24/18	32 sf	0 sf		\$15.5375/sf	\$497.20
12	M5052H32S.040					5052-H32 .040 Sheet MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf	Firmed	-	7/24/18	32 sf	0 sf		\$14.1434375/sf	\$132.59
13	M6061T6R1.250					6061-T6 Round Bar 1.250 MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ- AA-200/8 OR AMS-QQ-A- 200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	-	7/24/18	20 ft	0 ft		\$4.985/ft	\$99.70
14	MT-1144-R0.750					1144 Steel Proof Round Bar 0.750" MATERIAL: AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440	Firmed	-	7/31/18	24 ft	0 ft		\$3.12/ft	\$74.88
15	M6061T6B1.000X02.000					6061-T6 Bar 1.00 X 2.00 MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed	-	7/24/18	20 ft	0 ft		\$8.303/ft	\$166.06

Line Item Note 2 pcs of 12 ft

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https://www.plexonline.com/dc1e8fc7-3857-466c-b2e8-06a00c14f8b/Plexus\_Control/Report\_View\_2.asp?v=u%1E.%2FPurchasing%2FPQ\_Print... 2/4

PURCHASE ORDER

Items

Line Item	Job	Part	Supplier	Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
16		M6061T6B0.375X0.750			6061-T6 Bar .375 X .750 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS-QQ-4117/4128/4115/4116 OR A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed -		7/24/18	20 ft	0 ft		\$1,288/ft	\$25.76
17		M6061T6B0.500X02.000			6061-T6 Bar .500 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS-QQ-4117/4128/4115/4116 OR A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed -		7/24/18	20 ft	0 ft		\$4.148/ft	\$82.96
18		M6061T6B0.750X02.000			6061-T6 Bar .750 X 2.00 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS-QQ-4117/4128/4115/4116 OR A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed -		7/24/18	20 ft	0 ft		\$6.2895/ft	\$125.79
19		M6061T6B3.000X01.500			6061-T6 Bar 3.00 X 1.50 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS-QQ-4117/4128/4115/4116 OR A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed -		7/24/18	12 ft	0 ft		\$18.043333/ft	\$216.52
20		M6061T6S.040			6061-T6 .040 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 receive sf	Firmed -		7/24/18	144 sf	0 sf		\$8.5069444/sf	\$1,225.00
21		M6061T6S.080			6061-T6 .080 Sheet : MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 receive sf	Firmed -		7/24/18	288 sf	0 sf		\$9.6979166/sf	\$2,793.00
Grand Total: \$9,019.94													
AUG 02 2018													

Order Notes

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PURCHASE ORDER

Order Notes	
Procurement Quality Clauses	
A005 right of entry	
A012 chemical and physical test report	
A016 personnel qualification	
A017 raw material identification (as applicable)	
A026 certification of material conformance	
A041 quality management system	
A042 dart notification by supplier	
A043 retention of quality documents	
A048 counterfeit parts avoidance, detection, mitigation and disposition program	
A049 supplier awareness	
Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit <a href="http://www.dartaerospace.com">www.dartaerospace.com</a> for further explanation.	

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Plex 7/17/18 2:49 PM dart.lavoie.chantal

Line Item Note 1 pcs of 40" x 40"

Line Item	Job	Part	Supplier	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1		MT-A513-T-3.750W0.125		ASTM A513 TYPE 5 (1020/1026) ALLOY STEEL ROUND TUBING	Firmed -		7/24/18	6 ft	0 ft	6 ft	\$120.30/ft	\$721.80
2		MT-A513-T-0.750W0.085		A513 Seamless Alloy Steel Round Tubing 0.75"dia. x 0.085" Wall	Firmed -		7/24/18	120 ft	0 ft	120 ft	\$4.65/ft	\$558.00
3		MT-A513-T-0.750W0.058		A513 Seamless Alloy Steel Round Tubing 0.75"dia. x 0.058" Wall	Firmed -		7/24/18	40 ft	0 ft	40 ft	\$2.3595/ft	\$94.38
4		MT-HRS-S-6GA		Hot Rolled Steel Sheet 6 Gauge 0.1943" TUBING (DOM)	Firmed -		7/24/18	16 sf	0 sf	16 sf	\$7.36625/sf	\$117.86
5		MT-4140-B-2.000X4.000		Steel Bar	Firmed -		7/31/18	4 ft	0 ft	4 ft	\$82.5425/ft	\$330.17
6		MT-4140-B-0.500X4.000		4140 Steel Bar 0.500 X 4.000	Firmed -		7/24/18	4 ft	0 ft	4 ft	\$6.3325/ft	\$25.33
7		MT-4140-S-0.500		AISI 4140 Steel Sheet receive ft	Firmed -		7/24/18	11.111 sf	0 sf	11 sf	\$80.34218/sf	\$892.68
ASTM A829, AMS 6395 = 32 Rc MAXIMUM ROCKWELL C = 28 Rc MINIMUM ROCKWELL C SHEET OR PLATE : AISI 4140 / 4142 STEEL												

Items

<b>Supplier:</b> AC1001-VC Acier Queltte Inc. 935 Boul. Du Havre Valleyfield J6S 5L1 Canada Phone: 800 667 4248 Fax: 450 377 5696	<b>Ship To:</b> 1270 Aberdeen Street Hawkesbury ON K6A 1K7 Canada Phone: 613-632-5200
<b>PO No:</b> PO040517 <b>PO Date:</b> 7/17/18 <b>Due Date:</b> 7/24/18 <b>Purchase Order</b> <b>Revision:</b> <b>Revision Date:</b> <b>Ship-To Contact:</b> Lavoie, Chantal Phone: clavote@dartaero.com <b>Via:</b> Ground <b>Pynt Terms:</b> Net 30 <b>Freight Terms:</b> <b>Special Comments:</b> quotation no sou0119261	

E-MAILED JUL 18 2018

<b>Dart Aerospace Ltd.</b> 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada Tel (613) 632-5200	<b>PURCHASE ORDER</b> PO040517
---	-----------------------------------

## PURCHASE ORDER

7/17/2018

## Items

Line	Item	Job	Part	Supplier	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
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8			M1018R4.000		M1018R4.000	Firmed		7/20/18	2 ft	0 ft		\$71.62/ft.	\$143.24
---	--	--	-------------	--	-------------	--------	--	---------	------	------	--	-------------	----------

9			M1018R2.750		M1018R2.750	Firmed		7/24/18	6 ft	0 ft		\$29.115/ft.	\$174.69
---	--	--	-------------	--	-------------	--------	--	---------	------	------	--	--------------	----------

10			M303R2.500		303 Round Bar 2.5" : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE: 304/316 NOT ACCEPTABLE receive ft	Firmed		7/24/18	4 ft	0 ft		\$20.50/ft.	\$82.00
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11			M304S11GA		304/316 0.125 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR ASTM 5524 (316) OR ASME SA240 receive ft	Firmed		7/24/18	32 sf	0 sf		\$15.5375/sf	\$497.20
----	--	--	-----------	--	--	--------	--	---------	-------	------	--	--------------	----------

12			M5052H32S.040		5052-H32 .040 Sheet : MATERIAL: 5052-H32 ALUMINUM SHEET AS PER QQ-A-250/8 OR AMS-QQ-A-250/8 OR AMS 4016 OR ASTM B209 receive sf	Firmed		7/24/18	32 sf	0 sf		\$4.1434375/sf	\$132.59
----	--	--	---------------	--	--	--------	--	---------	-------	------	--	----------------	----------

13			M6061T6R1.250		6061-T6 Round Bar 1.250 : MATERIAL: 6061-T6 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ- AA-200/8 OR AMS-QQ-A- 200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed		7/24/18	20 ft	0 ft		\$4.985/ft.	\$99.70
----	--	--	---------------	--	--	--------	--	---------	-------	------	--	-------------	---------

14			MT-1144-R0.750		1144 Steel Proof Round Bar 0.750" : MATERIAL: AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440	Firmed		7/31/18	24 ft	0 ft		\$3.12/ft.	\$74.88
----	--	--	----------------	--	---	--------	--	---------	-------	------	--	------------	---------

15			M6061T6B1.000X02.000		6061-T6 Bar 1.00 X 2.00 : MATERIAL: 6061-T6 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	Firmed		7/24/18	20 ft	0 ft		\$8.303/ft.	\$166.06
----	--	--	----------------------	--	---	--------	--	---------	-------	------	--	-------------	----------

Line Item Note 2 pcs of 12 ft

Line	Item	Job	Part	Supplier	Part No	Description	Status	Account	Due	Order	Quantity	Received	Balance	Unit	Extended
------	------	-----	------	----------	---------	-------------	--------	---------	-----	-------	----------	----------	---------	------	----------

16			M6061T6B0.375X0.750		6061T6 Bar .375 X .750	6061T6 Bar .375 X .750	Firmed	-	7/24/18	20 ft	0 ft	20 ft	\$1.288/ft		\$25.76
: MATERIAL: 6061-T6/T62															
ALUMINUM BAR PER															
QQ-A-225/8 OR AMS															
A-225/8 OR AMS															
4117/4128/4115/4116 OR															
QQ-A-200/8 OR AMS-QQ-															
A-200/8 OR AMS 4160															
OR ASTM B211 OR															
ASTM B221															
receive ft															
17			M6061T6B0.500X02.000		6061-T6 Bar .500 X 2.00	6061-T6 Bar .500 X 2.00	Firmed	-	7/24/18	20 ft	0 ft	20 ft	\$4.148/ft		\$82.96
: MATERIAL: 6061-T6/T62															
ALUMINUM BAR PER															
QQ-A-225/8 OR AMS-QQ-															
A-225/8 OR AMS															
4117/4128/4115/4116 OR															
QQ-A-200/8 OR AMS-QQ-															
A-200/8 OR AMS 4160															
OR ASTM B211 OR															
ASTM B221															
receive ft															
18			M6061T6B0.750X02.000		6061-T6 Bar .750 X 2.00	6061-T6 Bar .750 X 2.00	Firmed	-	7/24/18	20 ft	0 ft	20 ft	\$6.2895/ft		\$125.79
: MATERIAL: 6061-T6/T62															
ALUMINUM BAR PER															
QQ-A-225/8 OR AMS-QQ-															
A-225/8 OR AMS															
4117/4128/4115/4116 OR															
QQ-A-200/8 OR AMS-QQ-															
A-200/8 OR AMS 4160															
OR ASTM B211 OR															
ASTM B221															
receive ft															
19			M6061T6B3.000X01.500		6061-T6 Bar 3.00 X 1.50	6061-T6 Bar 3.00 X 1.50	Firmed	-	7/24/18	12 ft	0 ft	12 ft	\$18.043333/ft		\$216.52
: MATERIAL: 6061-T6/T62															
ALUMINUM BAR PER															
QQ-A-225/8 OR AMS-QQ-															
A-225/8 OR AMS															
4117/4128/4115/4116 OR															
QQ-A-200/8 OR AMS-QQ-															
A-200/8 OR AMS 4160															
OR ASTM B211 OR															
ASTM B221															
receive ft															
20			M6061T6S.040		6061-T6 .040 Sheet	6061-T6 .040 Sheet	Firmed	-	7/24/18	144 sf	0 sf	144 sf	\$8.5069444/sf		\$1,225.00
: MATERIAL: 6061-T6/T62															
ALUMINUM SHEET AS															
PER QQ-A-250/11 OR															
AMS-QQ-A-250/11 OR															
AMS 4025 OR AMS 4027															
OR ASTM B209															
receive sf															
21			M6061T6S.080		6061-T6 .080 Sheet	6061-T6 .080 Sheet	Firmed	-	7/24/18	288 sf	0 sf	288 sf	\$9.6979166/sf		\$2,793.00
: MATERIAL: 6061-T6/T62															
ALUMINUM SHEET AS															
PER QQ-A-250/11 OR															
AMS-QQ-A-250/11 OR															
AMS 4025 OR AMS 4027															
OR ASTM B209															
receive sf															

Order Notes

Plex 7/17/18 2:49 PM dant.lavoie.chanta

Grand Total: \$8,579.61

PURCHASE ORDER

Order Notes	
Procurement Quality Clauses	
A005 right of entry	
A012 chemical and physical test report	
A016 personnel qualification	
A017 raw material identification (as applicable)	
A026 certification of material conformance	
A041 quality management system	
A042 dart notification by supplier	
A043 retention of quality documents	
A048 counterfeit parts avoidance, detection, mitigation and disposition program	
A049 supplier awareness	
Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit <a href="http://www.darttaerospace.com">www.darttaerospace.com</a> for further explanation.	

Plex 7/17/18 2:49 PM dart.lavoie.chantal





**ACIER OUELLETTE INC.**  
935, Boul. du Hâvre  
Salaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

## Quotation

SOU0119261

**Customer N°** CL10001056  
**Date** 2018/07/10  
**Revision N°** 0  
**Prices valid until** 2018/07/17  
**Your Order N°**  
**Processed by** Denis Quenneville  
**Salesman** ERIC  
**Carrier** OUELLE SDV  
**Credit Terms** Net 30 Days  
**Page** 1

Att : CHANTAL LAVOIE Tél.: 613-632-5200

### Shipped to

1270 , ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

### Billed to

DART AEROSPACE LTD

Product N° and description	Weight	Qty U/M	Qty U/M	Price	Pcs Nb	Price	Amount
TUBE MEC. 3.750 OD X .120 (R) TME-3750120 6697 1 X 6' 6-7 DAYS	27.91	6.00	PI	6.00	PI	120.30	721.80
TUBE MEC. 0.750" OD X .083" VARIE N 6 X 20' R/L 2-3 DAYS	0.00	120.00	PI	120.00	UN	4.65	558.00
** PRICE VALID FOR TOTAL QUANTITY **							
TUBE MEC 0.750 OD X .065 (R) TME-0750065 6777 2 X 20' R/L 2-3 DAYS	19.04	40.00	PI_\$CPI	40.00	PI	2.36	94.38
PLATE 44W 3/16 RANDOM P44-316-V 4105 SHEAR CUT SHEAR 2 1 X 4' X 4' STOCK	122.40	16.00	PI2_\$CLB	16.00	PI2	6.12	97.86
PLATE 4140 HEAT TREAT 2 NS P4140-2H 9072 1 PC 4" X 4' 10 DAYS	108.65	1.33	PI2	1.33	UN_\$UN	248.25	330.17
PLATE 4140 HEAT TREAT 1/2 NS P4140-12H 8509 1 PC 4" X 4' 10 DAYS	27.16	1.33	PI2_\$CLB	1.33	UN_\$UN	19.05	25.33
PLATE 4140 HEAT TREAT 1/2 NS P4140-12H 8509 1 PC 40" X 40" 10 DAYS	226.87	11.11	PI2	11.11	UN_\$UN	80.35	892.69
ROUND CR 4 1018 (R) RCR-4 5344 SAW CUT SCIE 1 1 X 2' STOCK	85.44	2.00	PI_\$CLB	2.00	PI	66.62	133.24
		1.00	UN	1.00		10.00	10.00

Date :

Next Page...



**ACIER OUELLETTE INC.**  
935, Boul. du Havre  
Salaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl.: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl.: 514-336-4246 Ext.: 866-456-4242

SOU0119261

## Quotation

Customer N° CII0001056  
Date 2018/07/10  
Revision N° 0  
Prices valid until 2018/07/17  
Your Order N°  
Processed by Denis Quenneville  
Salesman ERIC  
Carrier QUELLE SDV  
Credit Terms Net 30 Days  
Page 2

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

Shipped to

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Product N° and description	Weight	Qty U/M	Qty U/M	Price	Pcs Nb	Price	Amount
ROUND CR 2 3/4 1018 (R) RCR-234 5310 SAW CUT SCIE 1 1 X 6' STOCK	121.14	6.00	PI_\$CLB	6.00	PI	27.45	164.69
ROUND 2-1/2" DIA RANDOM SS303 N 1 X 4' 4-5 DAYS	0.00	1.00	UN	1.00	UN	82.00	82.00
SHEET SS 11G SS304-2B (4 X 8) FESS-11G483042B 3402 PALLET EMB 11 1 X 4' X 8' STOCK	168.00	32.00	PI2_\$CLB	1.00	UN	497.20	497.20
ROUND SS 4 304 RANDOM NS RSS-4-V 8415 1 X 12' R/L 2-3 DAYS	512.76	12.00	PI_\$CLB	12.00	PI	145.71	1 748.51
ALU SHEET .040 (18G) 5052-H32 (4 X 8) FEAL-040485052 3124 1 X 4' X 8' PVC 1 SIDE 2-3 DAYS	18.02	32.00	PI2_\$CLB	1.00	UN	132.59	132.59
ROUND ALU 1 1/4 6061-T6 * RAL-114 5121 1 X 20' STOCK	28.82	20.00	PI_\$CLB	20.00	PI	4.99	99.70
TUBE ALU 1 1/4 X 1 1/4 X .120 6063-T5 C * TAL-114114120C 6310 3 X 21' STOCK	40.32	63.00	PI_\$CLB	63.00	PI	2.31	145.54
ROUND 3/4" DIA RANDOM STRESSPROOF N 1 X 24' OR 2 X 12' 7-10 DAYS	0.00	24.00	PI	24.00	UN	3.12	74.88

Date :

Next Page...



**ACIER OUELLETTE INC.**  
935, Boul. du Havre  
Salaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

## Quotation

SOU0119261

Customer N° CL10001056

Date 2018/07/10

Revision N° 0

Prices valid until 2018/07/17

Your Order N°

Processed by Denis Quenneville

Salesman ERIC

Carrier OUELLE SDV

Credit Terms Net 30 Days

Page 3

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Alt : CHANTAL LAVOIE Tél.: 613-632-5200

Product N° and description	Weight	Qty U/M	Price U/M	Qty U/M	Price U/M	Pcs Nb	Price	Amount
HEX BAR 1" RANDOM STRESSPROOF N REGRET, NOT AVAILABLE	0.00	0.00 UN	0.00 UN	0.00 UN	0.00			0.00
FLAT ALU 1 X 2 6061-T6 * FAL-12 2497 1 X 20' STOCK	48.00	20.00	PI_\$CLB	20.00	PI	8.30		166.06
FLAT ALU 1 X 4 6061-T6 * FAL-14 2532 3 X 12' STOCK	172.80	36.00	PI_\$CLB	36.00	PI	17.09		615.08
FLAT ALU 1 X 5 6061-T6 * FAL-15 2534 2 X 12' STOCK	140.98	24.00	PI_\$CLB	24.00	PI	20.32		487.71
FLAT ALU 1 1/4 X 2 6061-T6 * FAL-1142 2456 1 X 12' STOCK	35.28	12.00	PI_\$CLB	12.00	PI	10.76		129.11
FLAT ALU 3/8 X 3/4 6061-T6 * FAL-3834 2620 1 X 20' STOCK	6.62	20.00	PI_\$CLB	20.00	PI	1.29		25.76
FLAT ALU 1/2 X 2 6061-T6 * FAL-122 2481 4.143 1 X 20' STOCK	23.98	20.00	PI_\$CLB	20.00	PI	4.15		82.96
FLAT ALU 3/4 X 2 6061-T6 * FAL-342 2592 6.285 1 X 20' STOCK	36.36	20.00	PI_\$CLB	20.00	PI	6.29		125.79
FLAT ALU 1 1/2 X 3 6061-T6 * FAL-1123 2445 18.04333 1 X 12' STOCK	63.50	12.00	PI_\$CLB	12.00	PI	18.04		216.52
ALU SHEET .040 (18G) 6061-T6 RANDOM FEAL-0406061-V 3131 3 X 4' X 12' PVC 1 SIDE 3-4 DAYS	81.07	144.00	PI_\$CLB	144.00	PI2	8.51		1 225.00

Date :

Next Page...



**ACIER OUELLETTE INC.**  
935, Boul. du Hâvre  
Salaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

## Quotation

SOU0119261

Customer N° CLIO001056

Date 2018/07/10

Revision N° 0

Prices valid until 2018/07/17

Your Order N°

Processed by

Denis Quenneville

Salesman

ERIC

Carrier

OUELLE SDV

Credit Terms

Net 30 Days

Page

4

Billed to

DART AEROSPACE LTD

1270, ABERDEEN ST.

HAWKESBURY, Ontario, K6A 1K7

Shipped to

, Ontario,

Att : CHANTAL LAVOIE Tél.: 613-632-5200

Product N° and description	Weight	Qty U/M	Price U/M	Qty U/M	Price U/M	Pcs Nb	Price	Amount
----------------------------	--------	---------	-----------	---------	-----------	--------	-------	--------

ALU SHEET .081 (12G) 6061-T6 RANDOM

164.30

144.00 P12-\$CLB

144.00 P12 9.70

1 396.50

FEAL-0816061-V 3205  
3 X 4' X 12' PVC 1 SIDE 3-4 DAYS

FUEL CHARGE

FRAIS\_ENERGÉTIQUE

Total Weight (Lbs) 2 279.42

Sub-total

10 313.02

TVH-13 • • 1340.69

Total (\$CAD)

11 653.71

Approved and Accepted by :

Date :

This offer is based on the availability, the price of material can change without notice in function of the evolution of the current market prices.

This offer is subject to credit approval.

Chantal Lavoie

From: Chantal Lavoie  
Sent: Monday, July 09, 2018 1:25 PM  
To: 'Eric Kaehler'  
Cc: 'Josianne Bourdon'  
Subject: quote

Good afternoon Eric,  
Please advise pricing and delivery on the following mat'l.

~~A513 round tubing 3.750" X .125" WALL X 6 FT~~  
~~A513 round tubing 0.750" X .085" wall x 120 ft~~  
~~A513 round tubing 0.750" X .058" wall x 40 ft~~

~~HRS sheet 6 GA X 4 FT X 4 FT X 1 PCS~~

~~4140 bar or plate 2" X 4" X 4 FT~~

~~4140 bar 0.500" X 4" X 4 ft~~

~~4140 sheet .500" X 4 FT X 4 FT X 1 PCS~~

~~1018 round bar 4" X 2 FT~~

~~1018 round bar 2.750" X 6 ft~~

~~303 round bar 2.5" X 4 FT~~

~~304 sheet 11 ga x 32 sf~~

~~304 round bar 4" x 12 ft cut in section 6ft~~

~~5052h32 sheet .040" x 32 sf~~

~~60616 round bar 1.250" x 24 ft~~

~~60616 square tubing flat edge 1.250" x .120" wall x 60 ft~~

~~1144 round bar 0.750" x 24 ft~~

~~1144 hex bar 1" x 12 ft~~

~~60616 bar 1" x 2" x 24 ft~~

~~60616 bar 1" x 4" x 36 ft~~

~~60616 bar 1" x 5" x 24 ft~~

~~60616 bar 1.250" x 2" x 12 ft~~

~~60616 bar 0.375" x 0.750" x 12 ft~~

~~60616 bar 0.500" x 2" x 12 ft~~

~~60616 bar 0.750" x 2" x 12 ft~~

~~60616 bar 3" x 1.5" x 12 ft~~

~~606116 sheet .040" x 128 sf~~  
~~606116 sheet .080" x 144 sf~~

Thanks  
Chantal

**Chantal Lavoie**  
*Purchasing Coordinator*

DART AEROSPACE  
T 1 613 632-5200  
F 1 613 632-1053  
E [clavoie@dartaero.com](mailto:clavoie@dartaero.com)  
1 800 556-4166  
[www.dartaerospace.com](http://www.dartaerospace.com)





www.dartaerospace.com  
1 800 556- 4166  
F 1 613 632-5246  
T 1 613 632-5200 > 236

DART AEROSPACE  
DANIEL PAQUETTE  
Production Engineering Coordinator

Chantal please order 4' X 4' sheet of this. Thanks.

Michelle please enter into PLEX. Thanks.

From: Daniel Paquette  
Sent: Tuesday, July 03, 2018 8:24 AM  
To: Michelle GagnonDonovan; Chantal Lavoie  
Cc: Francois Kirouac; Jean Francois Cadieux  
Subject: MT-4140-S-0.500 Ref; 20NR-09 AND 20NR-43

Chantal Lavoie

Chantal please order 4' X 4' sheet of this. Thanks.

Michelle please enter into PLEX. Thanks.

From: Daniel Paquette  
Sent: Friday, June 29, 2018 11:08 AM  
To: Michelle GagnonDonovan <mgagnondonovan@dartaero.com>; Chantal Lavoie <clavoie@dartaero.com>  
Subject: M1018S6GA Ref; RBEM651V3000125-1 SO 7355

MT-HRS-S-6GA

Use this part number instead since we have a drawing for this. Thanks.

From: Daniel Paquette  
Sent: Friday, June 29, 2018 11:24 AM  
To: Michelle GagnonDonovan; Chantal Lavoie  
Subject: REVISED PART NUMBER RE: M1018S6GA Ref; RBEM651V3000125-1 SO 7355

Chantal Lavoie



---

## Chantal Lavoie

**From:** Daniel Paquette  
**Sent:** Friday, July 06, 2018 2:16 PM  
**To:** Chantal Lavoie  
**Cc:** Francois Kirouac; Jean Francois Cadieux  
**Subject:** M1018R4.000 Ref: RBT18526-4

Please order 12" of this please. Thanks.

**DANIEL PAQUETTE**  
*Production Engineering Coordinator*

DART AEROSPACE  
T 1 613 632-5200 > 236  
F 1 613 632-5246

---

## Chantal Lavoie

**From:** Francois Kirouac  
**Sent:** Wednesday, July 04, 2018 8:08 AM  
**To:** Chantal Lavoie; Michelle GagnonDonovan  
**Cc:** Kim Johnston  
**Subject:** M303R2.500 REF: RBEM622V4008101-7 S/O: 7355

Kim/Michelle please enter into PLEX. Thanks.

Chantal please order 4 ft of M303R2.500 . Thanks.

Francois Kirouac

Chantal Lavoie

From:

Sent:

To:

Subject:

Daniel Paquette

Friday, July 06, 2018 11:42 AM

Michelle GagnonDonovan; Chantal Lavoie

MT-4140-B-2.000X4.000 Ref; RB 92700-10329-041-7

Michelle please enter into PLEX. Thanks.

Chantal please order 4 feet of this. Thanks.

DANIEL PAQUETTE

Production Engineering Coordinator

11 APT

From:

Sent:

To:

Subject:

Daniel Paquette

Friday, July 06, 2018 2:25 PM

Michelle GagnonDonovan; Chantal Lavoie

MT-A513-T-3.750W0.125 Ref; RB118526-5

Michelle please enter into PLEX. Thanks.

Chantal please order 4 feet of this. Thanks.



DANIEL PAQUETTE

Production Engineering Coordinator

11 APT



Heat: A 372490

<b>GOOD LUCK INDUSTRIES</b> (A UNIT OF GOODLUCK INDIA LTD.) A-31, SIKANDRABAD INDUSTRIAL AREA, SIKANDRABAD, DISTT. BULANDSHAHAR (UP/INDIA) TEL. NO. +91-120-419600, FAX. NO. +91-120-419666 An ISO 9001:2008-14001 & OHSA 18001 Certified Company Sr.No. GL/INTC/1456/DATE/31.01.2018 Customer: SALEM STEEL NORTH AMERICA, LLC Size: 0.750" OD X 0.584" ID X 17'-19" L Specification: ASTM A 513 A513M-15/75 1020 GRA HEAT NO & COIL NO. A372490/1-18M-035 Item no. 1		<b>DEPARTMENT-QUALITY ASSURANCE</b> <b>WORK TEST CERTIFICATE</b>		Doc. No.: GL-PT-2A-20 Rev. No.: 4 REV. Date: 18-07-2016  <b>GOODLUCK</b>								
Purchase Order No.: G97145-P RUM Supplier: USW Invoice No. & Date: GLINDIA 7-18/0133731.01.2018 Container No.: CLHU-4659430 Quantity: 271 PCS (108 X 01, 102 X 01) FEET : 4981 LBS- 2983 Bundle No.: 017145-P-1-2 TO 017145-P-1-3												
<b>CHEMICAL PROPERTIES</b>												
	C%	Mn%	S%	P%	max.	Si%	Al%	N%	Tensile Strength (psi) min.	Yield Strength (psi) min.	EL % min.	Hardness (HRB) min.
SPECIFIED	0.18 0.23	0.30 0.60	0.035	0.035					65000	53000	10%	75
ACTUAL	0.194	0.489	0.004	0.010		0.081	0.040	0.0843	98452	81984	21%	85 80
Plant Test : Min 1/3 % of OD passed. Flaring Test : Min 15 % of ID passed Straightness : 0.030"/3.0" Max. passed					Surface : Satisfactory Edgely Current Test : 100% Tubes tested found satisfactory Material Grade : Fully Killed Final Condition : SMA as per P.O.							
This is to certify that the material supplied conforms to all requirements as specified by the customer. This test certificate confirms to EN 10204-3.1 NOTE: Material compliance to European Environmental Legislation- RoHS Directive 2002/95/EC. COUNTRY OF ORIGIN: INDIA					PREPARED BY  (FOR GOODLUCK INDUSTRIES) H.O.D. Quality Assurance (FOR GOODLUCK INDUSTRIES)							

61.22803-1

REV.	DESCRIPTION	EON #	DATE	BY	APPROVED
A	NEW RELEASE	17-655	17/09/06	VM	VM
B	TYPE 5 ADDED, TEMPLATE UPDATED	17-790	17/12/13	VM	ML

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: ASTM A513 TYPE 5 (1020/1026) SEAMLESS ALLOY STEEL ROUND TUBING (DOM)

SPECIFICATION: ASTM A513 TYPE 5

PART NUMBER: MT-A513-T-(D.DDD)WT.TTT

WHERE D.DDD IS OUTSIDE DIAMETER IN INCHES  
WHERE T.TTT IS WALL THICKNESS IN INCHES  
EG. 3/4" ROUND TUBING WITH .120" WALL THICKNESS = MT-A513-T-0.750W0.120

<b>DART</b> AEROSPACE		Headquarters, Ontario, Canada	
TITLE ASTM A513 TYPE 5 (1020/1026) ALLOY STEEL, ROUND TUBING (DOM)			
PART NO.	MT-A513-T	REV	B
TOOL NO. _____ DATE DESIGNED BY: VM 17/12/13 DATE DRAWN BY: VM 17/12/13 CHECKED BY: ML 12/20/2017 INFO REVIEW BY: DP 12/20/2017 APPROVED BY: ML 12/20/2017			
UNIT OF MEASURE: INCHES DIMENSIONS: PER ASME Y14.5M, UNLESS OTHERWISE SPECIFIED TOLERANCES: FRACTIONS: 1/16, 1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/2, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 24, 28, 32, 36, 40, 48, 56, 64, 72, 80, 96, 112, 128, 144, 160, 176, 192, 208, 224, 240, 256, 272, 288, 304, 320, 336, 352, 368, 384, 400, 416, 432, 448, 464, 480, 496, 512, 528, 544, 560, 576, 592, 608, 624, 640, 656, 672, 688, 704, 720, 736, 752, 768, 784, 800, 816, 832, 848, 864, 880, 896, 912, 928, 944, 960, 976, 992, 1008, 1024, 1040, 1056, 1072, 1088, 1104, 1120, 1136, 1152, 1168, 1184, 1200, 1216, 1232, 1248, 1264, 1280, 1296, 1312, 1328, 1344, 1360, 1376, 1392, 1408, 1424, 1440, 1456, 1472, 1488, 1504, 1520, 1536, 1552, 1568, 1584, 1600, 1616, 1632, 1648, 1664, 1680, 1696, 1712, 1728, 1744, 1760, 1776, 1792, 1808, 1824, 1840, 1856, 1872, 1888, 1904, 1920, 1936, 1952, 1968, 1984, 2000, 2016, 2032, 2048, 2064, 2080, 2096, 2112, 2128, 2144, 2160, 2176, 2192, 2208, 2224, 2240, 2256, 2272, 2288, 2304, 2320, 2336, 2352, 2368, 2384, 2400, 2416, 2432, 2448, 2464, 2480, 2496, 2512, 2528, 2544, 2560, 2576, 2592, 2608, 2624, 2640, 2656, 2672, 2688, 2704, 2720, 2736, 2752, 2768, 2784, 2800, 2816, 2832, 2848, 2864, 2880, 2896, 2912, 2928, 2944, 2960, 2976, 2992, 3008, 3024, 3040, 3056, 3072, 3088, 3104, 3120, 3136, 3152, 3168, 3184, 3200, 3216, 3232, 3248, 3264, 3280, 3296, 3312, 3328, 3344, 3360, 3376, 3392, 3408, 3424, 3440, 3456, 3472, 3488, 3504, 3520, 3536, 3552, 3568, 3584, 3600, 3616, 3632, 3648, 3664, 3680, 3696, 3712, 3728, 3744, 3760, 3776, 3792, 3808, 3824, 3840, 3856, 3872, 3888, 3904, 3920, 3936, 3952, 3968, 3984, 4000, 4016, 4032, 4048, 4064, 4080, 4096, 4112, 4128, 4144, 4160, 4176, 4192, 4208, 4224, 4240, 4256, 4272, 4288, 4304, 4320, 4336, 4352, 4368, 4384, 4400, 4416, 4432, 4448, 4464, 4480, 4496, 4512, 4528, 4544, 4560, 4576, 4592, 4608, 4624, 4640, 4656, 4672, 4688, 4704, 4720, 4736, 4752, 4768, 4784, 4800, 4816, 4832, 4848, 4864, 4880, 4896, 4912, 4928, 4944, 4960, 4976, 4992, 5008, 5024, 5040, 5056, 5072, 5088, 5104, 5120, 5136, 5152, 5168, 5184, 5200, 5216, 5232, 5248, 5264, 5280, 5296, 5312, 5328, 5344, 5360, 5376, 5392, 5408, 5424, 5440, 5456, 5472, 5488, 5504, 5520, 5536, 5552, 5568, 5584, 5600, 5616, 5632, 5648, 5664, 5680, 5696, 5712, 5728, 5744, 5760, 5776, 5792, 5808, 5824, 5840, 5856, 5872, 5888, 5904, 5920, 5936, 5952, 5968, 5984, 6000, 6016, 6032, 6048, 6064, 6080, 6096, 6112, 6128, 6144, 6160, 6176, 6192, 6208, 6224, 6240, 6256, 6272, 6288, 6304, 6320, 6336, 6352, 6368, 6384, 6400, 6416, 6432, 6448, 6464, 6480, 6496, 6512, 6528, 6544, 6560, 6576, 6592, 6608, 6624, 6640, 6656, 6672, 6688, 6704, 6720, 6736, 6752, 6768, 6784, 6800, 6816, 6832, 6848, 6864, 6880, 6896, 6912, 6928, 6944, 6960, 6976, 6992, 7008, 7024, 7040, 7056, 7072, 7088, 7104, 7120, 7136, 7152, 7168, 7184, 7200, 7216, 7232, 7248, 7264, 7280, 7296, 7312, 7328, 7344, 7360, 7376, 7392, 7408, 7424, 7440, 7456, 7472, 7488, 7504, 7520, 7536, 7552, 7568, 7584, 7600, 7616, 7632, 7648, 7664, 7680, 7696, 7712, 7728, 7744, 7760, 7776, 7792, 7808, 7824, 7840, 7856, 7872, 7888, 7904, 7920, 7936, 7952, 7968, 7984, 8000, 8016, 8032, 8048, 8064, 8080, 8096, 8112, 8128, 8144, 8160, 8176, 8192, 8208, 8224, 8240, 8256, 8272, 8288, 8304, 8320, 8336, 8352, 8368, 8384, 8400, 8416, 8432, 8448, 8464, 8480, 8496, 8512, 8528, 8544, 8560, 8576, 8592, 8608, 8624, 8640, 8656, 8672, 8688, 8704, 8720, 8736, 8752, 8768, 8784, 8800, 8816, 8832, 8848, 8864, 8880, 8896, 8912, 8928, 8944, 8960, 8976, 8992, 9008, 9024, 9040, 9056, 9072, 9088, 9104, 9120, 9136, 9152, 9168, 9184, 9200, 9216, 9232, 9248, 9264, 9280, 9296, 9312, 9328, 9344, 9360, 9376, 9392, 9408, 9424, 9440, 9456, 9472, 9488, 9504, 9520, 9536, 9552, 9568, 9584, 9600, 9616, 9632, 9648, 9664, 9680, 9696, 9712, 9728, 9744, 9760, 9776, 9792, 9808, 9824, 9840, 9856, 9872, 9888, 9904, 9920, 9936, 9952, 9968, 9984, 10000, 10016, 10032, 10048, 10064, 10080, 10096, 10112, 10128, 10144, 10160, 10176, 10192, 10208, 10224, 10240, 10256, 10272, 10288, 10304, 10320, 10336, 10352, 10368, 10384, 10400, 10416, 10432, 10448, 10464, 10480, 10496, 10512, 10528, 10544, 10560, 10576, 10592, 10608, 10624, 10640, 10656, 10672, 10688, 10704, 10720, 10736, 10752, 10768, 10784, 10800, 10816, 10832, 10848, 10864, 10880, 10896, 10912, 10928, 10944, 10960, 10976, 10992, 11008, 11024, 11040, 11056, 11072, 11088, 11104, 11120, 11136, 11152, 11168, 11184, 11200, 11216, 11232, 11248, 11264, 11280, 11296, 11312, 11328, 11344, 11360, 11376, 11392, 11408, 11424, 11440, 11456, 11472, 11488, 11504, 11520, 11536, 11552, 11568, 11584, 11600, 11616, 11632, 11648, 11664, 11680, 11696, 11712, 11728, 11744, 11760, 11776, 11792, 11808, 11824, 11840, 11856, 11872, 11888, 11904, 11920, 11936, 11952, 11968, 11984, 12000, 12016, 12032, 12048, 12064, 12080, 12096, 12112, 12128, 12144, 12160, 12176, 12192, 12208, 12224, 12240, 12256, 12272, 12288, 12304, 12320, 12336, 12352, 12368, 12384, 12400, 12416, 12432, 12448, 12464, 12480, 12496, 12512, 12528, 12544, 12560, 12576, 12592, 12608, 12624, 12640, 12656, 12672, 12688, 12704, 12720, 12736, 12752, 12768, 12784, 12800, 12816, 12832, 12848, 12864, 12880, 12896, 12912, 12928, 12944, 12960, 12976, 12992, 13008, 13024, 13040, 13056, 13072, 13088, 13104, 13120, 13136, 13152, 13168, 13184, 13200, 13216, 13232, 13248, 13264, 13280, 13296, 13312, 13328, 13344, 13360, 13376, 13392, 13408, 13424, 13440, 13456, 13472, 13488, 13504, 13520, 13536, 13552, 13568, 13584, 13600, 13616, 13632, 13648, 13664, 13680, 13696, 13712, 13728, 13744, 13760, 13776, 13792, 13808, 13824, 13840, 13856, 13872, 13888, 13904, 13920, 13936, 13952, 13968, 13984, 14000, 14016, 14032, 14048, 14064, 14080, 14096, 14112, 14128, 14144, 14160, 14176, 14192, 14208, 14224, 14240, 14256, 14272, 14288, 14304, 14320, 14336, 14352, 14368, 14384, 14400, 14416, 14432, 14448, 14464, 14480, 14496, 14512, 14528, 14544, 14560, 14576, 14592, 14608, 14624, 14640, 14656, 14672, 14688, 14704, 14720, 14736, 14752, 14768, 14784, 14800, 14816, 14832, 14848, 14864, 14880, 14896, 14912, 14928, 14944, 14960, 14976, 14992, 15008, 15024, 15040, 15056, 15072, 15088, 15104, 15120, 15136, 15152, 15168, 15184, 15200, 15216, 15232, 15248, 15264, 15280, 15296, 15312, 15328, 15344, 15360, 15376, 15392, 15408, 15424, 15440, 15456, 15472, 15488, 15504, 15520, 15536, 15552, 15568, 15584, 15600, 15616, 15632, 15648, 15664, 15680, 15696, 15712, 15728, 15744, 15760, 15776, 15792, 15808, 15824, 15840, 15856, 15872, 15888, 15904, 15920, 15936, 15952, 15968, 15984, 16000, 16016, 16032, 16048, 16064, 16080, 16096, 16112, 16128, 16144, 16160, 16176, 16192, 16208, 16224, 16240, 16256, 16272, 16288, 16304, 16320, 16336, 16352, 16368, 16384, 16400, 16416, 16432, 16448, 16464, 16480, 16496, 16512, 16528, 16544, 16560, 16576, 16592, 16608, 16624, 16640, 16656, 16672, 16688, 16704, 16720, 16736, 16752, 16768, 16784, 16800, 16816, 16832, 16848, 16864, 16880, 16896, 16912, 16928, 16944, 16960, 16976, 16992, 17008, 17024, 17040, 17056, 17072, 17088, 17104, 17120, 17136, 17152, 17168, 17184, 17200, 17216, 17232, 17248, 17264, 17280, 17296, 17312, 17328, 17344, 17360, 17376, 17392, 17408, 17424, 17440, 17456, 17472, 17488, 17504, 17520, 17536, 17552, 17568, 17584, 17600, 17616, 17632, 17648, 17664, 17680, 17696, 17712, 17728, 17744, 17760, 17776, 17792, 17808, 17824, 17840, 17856, 17872, 17888, 17904, 17920, 17936, 17952, 17968, 17984, 18000, 18016, 18032, 18048, 18064, 18080, 18096, 18112, 18128, 18144, 18160, 18176, 18192, 18208, 18224, 18240, 18256, 18272, 18288, 18304, 18320, 18336, 18352, 18368, 18384, 18400, 18416, 18432, 18448, 18464, 18480, 18496, 18512, 18528, 18544, 18560, 18576, 18592, 18608, 18624, 18640, 18656, 18672, 18688, 18704, 18720, 18736, 18752, 18768, 18784, 18800, 18816, 18832, 18848, 18864, 18880, 18896, 18912, 18928, 18944, 18960, 18976, 18992, 19008, 19024, 19040, 19056, 19072, 19088, 19104, 19120, 19136, 19152, 19168, 19184, 19200, 19216, 19232, 19248, 19264, 19280, 19296, 19312, 19328, 19344, 19360, 19376, 19392, 19408, 19424, 19440, 19456, 19472, 19488, 19504, 19520, 19536, 19552, 19568, 19584, 19600, 19616, 19632, 19648, 19664, 19680, 19696, 19712, 19728, 19744, 19760, 19776, 19792, 19808, 19824, 19840, 19856, 19872, 19888, 19904, 19920, 19936, 19952, 19968, 19984, 20000, 20016, 20032, 20048, 20064, 20080, 20096, 20112, 20128, 20144, 20160, 20176, 20192, 20208, 20224, 20240, 20256, 20272, 20288, 20304, 20320, 20336, 20352, 20368, 20384, 20400, 20416, 20432, 20448, 20464, 20480, 20496, 20512, 20528, 20544, 20560, 20576, 20592, 20608, 20624, 20640, 20656, 20672, 20688, 20704, 20720, 20736, 20752, 20768, 20784, 20800, 20816, 20832, 20848, 20864, 20880, 20896, 20912, 20928, 20944, 20960, 20976, 20992, 21008, 21024, 21040, 21056, 21072, 21088, 21104, 21120, 21136, 21152, 21168, 21184, 21200, 21216, 21232, 21248, 21264, 21280, 21296, 21312, 21328, 21344, 21360, 21376, 21392, 21408, 21424, 21440, 21456, 21472, 21488, 21504, 21520, 21536, 21552, 21568, 21584, 21600, 21616, 21632, 21648, 21664, 21680, 21696, 21712, 21728, 21744, 21760, 21776, 21792, 21808, 21824, 21840, 21856, 21872, 21888, 21904, 21920, 21936, 21952, 21968, 21984, 22000, 22016, 22032, 22048, 22064, 22080, 22096, 22112, 22128, 22144, 22160, 22176, 22192, 22208, 22224, 22240, 22256, 22272, 22288, 22304, 22320, 22336, 22352, 22368, 22384, 22400, 22416, 22432, 22448, 22464, 22480, 22496, 22512, 22528, 22544, 22560, 22576, 22592, 22608, 22624, 22640, 22656, 22672, 22688, 22704, 22720, 22736, 22752, 22768, 22784, 22800, 22816, 22832, 22848, 22864, 22880, 22896, 22912, 22928, 22944, 22960, 22976, 22992, 23008, 23024, 23040, 23056, 23072, 23088, 23104, 23120, 23136, 23152, 23168, 23184, 23200, 23216, 23232, 23248, 23264, 23280, 23296, 23312, 23328, 23344, 23360, 23376, 23392, 23408, 23424, 23440, 23456, 23472, 23488, 23504, 23520, 23536, 23552, 23568, 23584, 23600, 23616, 23632, 23648, 23664, 23680, 23696, 23712, 23728, 23744, 23760, 23776, 23792, 23808, 23824, 23840, 23856, 23872, 23888, 23904, 23920, 23936, 23952, 23968, 23984, 24000, 24016, 24032, 24048, 24064, 24080, 24096, 24112, 24128, 24144, 24160, 24176, 24192, 24208, 24224, 24240, 24256, 24272, 24288, 24304, 24320, 24336, 24352, 24368, 24384, 24400, 24416, 24432, 24448, 24464, 24480, 24496, 24512, 24528, 24544, 24560, 24576, 24592, 24608, 24624, 24640, 24656, 24672, 24688, 24704, 24720, 24736, 24752, 24768, 24784, 24800, 24816, 24832, 24848, 24864, 24880, 24896, 24912, 24928, 24944, 24960, 24976, 24992, 25008, 25024, 25040, 25056, 25072, 25088, 25104, 25120, 25136, 25152, 25168, 25184, 25200, 25216, 25232, 25248, 25264, 25280, 25296, 25312, 25328, 25344, 25360, 25376, 25392, 25408, 25424, 25440, 25456, 25472, 25488, 25504, 25520, 25536, 25552, 25568, 25584, 25600, 25616, 25632, 25648, 25664, 25680, 25696, 25712, 25728, 25744, 25760, 25776, 25792, 25808, 25824, 25840, 25856, 25872, 25888, 25904, 25920, 25936, 25952, 25968, 25984, 26000, 26016, 26032, 26048, 26064, 26080, 26096, 26112, 26128, 26144, 26160, 26176, 26192, 26208, 26224, 26240, 26256, 26272, 26288, 26304, 26320, 26336, 26352, 26368, 26384, 26400, 26416, 26432, 26448, 26464, 26480, 26496, 26512, 26528, 26544, 26560, 26576, 26592, 26608, 26624, 26640, 26656, 26672, 26688, 26704, 26720, 26736, 26752, 26768, 26784, 26800, 26816, 26832, 26848, 26864, 26880, 26896, 26912, 26928, 26944, 26960, 26976, 26992, 27008, 27024, 27040, 27056, 27072, 27088, 27104, 27120, 27136, 27152, 27168, 27184, 27200, 27216, 27232, 27248, 27264, 27280, 27296, 27312, 27328, 27344, 27360, 27376, 27392, 27408, 27424, 27440, 27456, 27472, 27488, 27504, 27520, 27536, 27552, 27568, 27584, 27600, 27616, 27632			

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <b>DAS</b>	SIGNED OFF BY:	DATE: <b>18/07/31</b>
9-89		

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT MATERIAL PER M-DRAWING	Y	
CORRECT THICKNESS	Y	
PHOTO REQUIRED	Y	
CORRECT REF # TO LINK CERT	Y	
CORRECT MATERIAL IDENTIFICATION	Y	
CORRECT M# ON THE MATERIAL	Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

MATERIAL CERT REC'D: <b>1/25</b>	QUANTITY RECEIVED: <b>131.5'</b>	THICKNESS ORDERED: <b>0.750"</b>
QUANTITY INSPECTED: <b>131.5'</b>	QUANTITY REJECTED: <b>0</b>	THICKNESS RECEIVED: <b>0.750"</b>
DATE: <b>18/07/31</b>		SHEET SIZE ORDERED: <b>-</b>
MATERIAL: <b>MT-A513-T-0.750W-0.085</b>		SHEET SIZE RECEIVED: <b>-</b>
PO / BATCH NO.: <b>P0040517/5098038</b>		

MATERIAL RECEIPT INSPECTION FORM



5344

RCR-4

50906  
14201  
CA-50427

ARANA Y LUPARDO, 2  
48490 UGAO-MIRAVALLS/VIZCAYA (SPAIN)  
Tfno.: 946480211  
Fax: 946480128  
Email: calibradora@calibradospradera.es  
www.calibradospradera.es



## CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a / Made according to:

EN 10204/DIN 50049

3.1

Nº CERTIFICADO / CERTIFICATE NR.: 51485

ALBARAN 51485	CLIENTE LES ACIERS TRANSBEC (1997) LTÉE
Delivery Note Nr.	CUSTOMER

Productos Calibrados de acero. Condiciones técnicas de suministro.

Bright steel products. Technical delivery conditions.

PRODUCTO SOLICITADO / PRODUCT ACCORDING **ASTM A108**

Nº PEDIDO	DESCRIPCION	KGS.	TOLERANCIA	OT	MEGIDA
PAI-50039	1018 RED. ESTIRADO 63,50 (2 1/2")	966	-0,076	141918	63,50
OU-50041	1018 RED. ESTIRADO 63,50 (2 1/2")	966	-0,076	141942	63,50
OU-50041	1018 RED. TORNADO 74,61 (2 15/16")	1.062	-0,102	141944	74,61
OU-50041	1018 RED. ESTIRADO 60,33 (2 3/8")	1.106	-0,076	141941	60,33
SM-50274	1018 RED. ESTIRADO 44,45 (1 3/4")	1.042	-0,076	142427	44,45
PAR-50288	1018 RED. ESTIRADO 44,45 (1 3/4")	5.206	-0,076	142532	44,45
PAR-50288	1018 RED. TORNADO 101,6 (4")	1.166	-0,102	142534	101,60
VI-50322	1045 RED. ESTIRADO 50,80 (2")	986	-0,102	142589	50,80
VI-50322	1018 RED. ESTIRADO 34,93 (1 3/8")	1.046	-0,051	142603	34,93
VI-50322	1018 RED. ESTIRADO 44,45 (1 3/4")	1.122	-0,076	142602	44,45
VI-50322	1018 RED. ESTIRADO 63,50 (2 1/2")	966	-0,076	142596	63,50
VI-50322	1018 RED. TORNADO 74,61 (2 15/16")	4.242	-0,102	142595	74,61
SM-50365	1018 RED. ESTIRADO 63,50 (2 1/2")	966	-0,076	142716	63,50
SM-50365	1045 RED. ESTIRADO 50,80 (2")	890	-0,102	142713	50,80
SM-50365	1045 RED. ESTIRADO 63,50 (2 1/2")	1.222	-0,102	142712	63,50
CA-50427	1018 RED. TORNADO 101,6 (4")	1.162	-0,102	142769	101,60

Composición química de la colada / Chemical Analysis of Heat

MEGIDA	OF	COLADA	C	Cu	Mn	N	P	S	Si
63,50	0,00	141918	0,160	0,040	0,850	0,010	0,015	0,026	0,240
63,50	0,00	141942	0,160	0,040	0,850	0,010	0,015	0,026	0,240
74,61	0,00	141944	0,170	0,060	0,830	0,010	0,026	0,027	0,220
60,33	0,00	141941	0,160	0,040	0,850	0,010	0,015	0,026	0,240
44,45	0,00	142427	0,180	0,050	0,840	0,010	0,020	0,032	0,210
44,45	0,00	142532	0,180	0,050	0,840	0,010	0,020	0,032	0,210
101,60	0,00	142534	0,170	0,170	0,740	0,000	0,013	0,010	0,240
50,80	0,00	142589	0,460	0,000	0,670	0,000	0,006	0,003	0,220
34,93	0,00	142603	0,150	0,040	0,860	0,000	0,016	0,025	0,220
44,45	0,00	142602	0,180	0,050	0,840	0,010	0,020	0,032	0,210
63,50	0,00	142596	0,160	0,040	0,850	0,010	0,015	0,026	0,240
74,61	0,00	142595	0,170	0,060	0,830	0,010	0,026	0,027	0,220
63,50	0,00	42695 HS	0,160	0,040	0,850	0,010	0,015	0,026	0,240
63,50	0,00	42698 HS	0,160	0,040	0,850	0,010	0,015	0,026	0,240
50,80	0,00	42441	0,150	0,040	0,860	0,000	0,016	0,025	0,220
44,45	0,00	42699 HS	0,180	0,050	0,840	0,010	0,020	0,032	0,210
63,50	0,00	42695 HS	0,160	0,040	0,850	0,010	0,015	0,026	0,240
74,61	0,00	42698 HS	0,170	0,060	0,830	0,010	0,026	0,027	0,220
63,50	0,00	42462 HS	0,460	0,000	0,670	0,000	0,006	0,003	0,220
50,80	0,00	42462 HS	0,460	0,000	0,670	0,000	0,006	0,003	0,220
63,50	0,00	42695 HS	0,160	0,040	0,850	0,010	0,015	0,026	0,240
63,50	0,00	40736 IS	0,450	0,000	0,700	0,000	0,014	0,031	0,350
101,60	0,00	42629 AA	0,170	0,170	0,740	0,000	0,013	0,010	0,240

Características mecánicas / Mechanical properties



ARANA Y LUPARDO, 2  
48490 UGAO-MIRAVALLS/VIZCAYA (SPAIN)  
Tfno.: 946480211  
Fax: 946480128  
Email: calibradora@calibradospradera.es  
www.calibradospradera.es



## CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a /Made according to:

EN 10204/DIN 50049

3.1

Nº CERTIFICADO / CERTIFICATE NR.: 51485

ALBARAN 51485	CLIENTE LES ACIERS TRANSBEC (1997) LTÉE
Delivery Note Nr.	CUSTOMER

Productos Calibrados de acero. Condiciones técnicas de suministro.

Norm : EN 10277

Brighi steel products. Technical delivery conditions.

MEDIDA	OF	COLADA	Resistencia Tens. strength N/mm <sup>2</sup>	Límite elástico Yield point 0,2% N/mm <sup>2</sup>	Alargamiento Elongation Lo=50 mm	Dureza HB
Measurement	Cast Nr.					Hardness
63,50	141918	42695 HS	475,00	305,00	34,00	136,00
63,50	141942	42695 HS	475,00	305,00	34,00	136,00
74,61	141944	42698 HS	466,00	308,00	30,00	135,00
60,33	141941	42692 HS	460,00	308,00	33,00	135,00
44,45	142427	42699 HS	459,00	307,00	31,00	136,00
44,45	142532	42699 HS	459,00	307,00	31,00	136,00
101,60	142534	42629 AA	473,00	295,00	34,90	0,00
50,80	142589	42462 HS	668,00	378,00	21,00	182,00
34,93	142603	42441	459,00	301,00	31,00	134,00
44,45	142602	42699 HS	459,00	307,00	31,00	136,00
63,50	142596	42695 HS	475,00	305,00	34,00	136,00
74,61	142595	42698 HS	466,00	308,00	30,00	135,00
63,50	142716	42695 HS	475,00	305,00	34,00	136,00
50,80	142713	42462 HS	668,00	378,00	21,00	182,00
63,50	142712	40736 IS	0,00	0,00	0,00	205,00
101,60	142769	42629 AA	473,00	295,00	34,90	0,00

Calidad Superficial

DESCRIPCIÓN	OF	Clase
Description		EN 10277-1

Observaciones: BARRAS DE ACERO ESTIRADAS / TORNEADAS EN FRIO SIN ALEAR

DEPARTAMENTO DE CALIDAD: Certifica que el mencionado producto cumple con las especificaciones del pedido.  
QUALITY DEPARTMENT: Certify that the product fulfills the order specifications.

Firmado: Susana Fernández  
Directora de Calidad



# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: ANSI 1018-1025 ROUND BAR

SPECIFICATION:

MIL-S-7097 OR ASTM A108

PART NUMBER:

M1018-R.D.D.D. WHERE D.D.D. = DIAMETER IN INCHES  
DIA.

EG. 7/8" ROUND BAR = M1018-R0.875

TOLERANCES:

PER ASTM A108 AS FOLLOWS:

SIZE	TOLERANCE
UP TO 1.5" INCL.	+0.000/-0.002
OVER 1.5" TO 2.5" INCL.	+0.000/-0.003
OVER 2.5" TO 4.0" INCL.	+0.000/-0.004
OVER 4.0" TO 6.0" INCL.	+0.000/-0.005
OVER 6.0" TO 8.0" INCL.	+0.000/-0.006

RELEASED  
2012-09-24

B	REFORMAT, ADD ASTM A108, ADD TOLERANCES	CP	12.09.05
A	NEW ISSUE	DS	01.06.12
REV	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	CP		
CHECKED	A.P.		
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	12.09.05		

DART AEROSPACE LTD	
HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	REV. B
M1018-R	SHEET 1 OF 1
TITLE	SCALE
1018-1025 ROUND BAR	NTS
COPYRIGHT © 2001 BY DART AEROSPACE LTD	
ALL RIGHTS RESERVED. NO PART OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION	
ENGINEERING SIGNOFF (if required)	INSPECTED BY: <u>AT</u>
SIGNED OFF BY:	DATE: <u>18/07/31</u>

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	ASTM A108
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	Link: 142764
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

MATERIAL: <u>M1018R400</u>	DATE: <u>18/07/31</u>
MATERIAL CERT REC'D: <u>1/25</u>	QUANTITY RECEIVED: <u>2'</u>
QUANTITY INSPECTED: <u>2'</u>	QUANTITY REJECTED: <u>0</u>
THICKNESS ORDERED: <u>4"</u>	THICKNESS RECEIVED: <u>4"</u>
THICKNESS ORDERED: <u>4"</u>	SHEET SIZE ORDERED: <u>1</u>
THICKNESS ORDERED: <u>4"</u>	SHEET SIZE RECEIVED: <u>1</u>
PO / BATCH NO.: <u>8040517/5048040</u>	

# MATERIAL RECEIPT INSPECTION FORM

ARANA Y LUPARDO, 2  
48490 UGAO-MIRAVALLES/VIZCAYA (SPAIN)  
Tfno.: 946480211  
Fax: 946480128  
Email: calpradera@calibradospredara.es  
www.calibradospredara.es



## CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a /Made according to:

EN 10204/DIN 50049

3.1

ALBARAN 47901	CLIENTE LES ACIERS TRANSBEC (1997) LTÉE	CUSTOMER
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Norma : EN 10277

Productos Calibrados de acero. Condiciones técnicas de suministro.

Norm : Bright steel products. Technical delivery conditions.

PRODUCTO SOLICITADO / PRODUCT ACCORDING ASTM A108

Nº Pedido	DESCRIPCIÓN	REMARKS	REMARKS	REMARKS	REMARKS
-----------	-------------	---------	---------	---------	---------

PAJ-47284	1018 RED. TORNEADO 101,6 (4")	1.989	-0,102	139585	
OU-47436	1018 RED. ESTIRADO 69,85 (2 3/4")	1.134	-0,102	138834	69,85
MJP-47531	1018 RED. ESTIRADO 57,15 (2 1/4")	1.050	-0,076	139149	57,15
MJP-47861	1018 RED. ESTIRADO 57,15 (2 1/4")	2.234	-0,076	139301	57,15
PAR-47786	1045 RED. ESTIRADO 50,80 (2")	1.074	-0,102	139307	50,80
OU-47812	1018 RED. ESTIRADO 69,85 (2 3/4")	751	-0,102	139335	69,85
MJP-47868	1018 RED. ESTIRADO 49,21 (1 15/16")	990	-0,076	139399	49,21
SM-47572	1018 RED. ESTIRADO 50,80 (2")	990	-0,076	139484	50,80
SM-47572	1018 RED. ESTIRADO 57,15 (2 1/4")	1.050	-0,076	139485	57,15
AQM-47672	1018 RED. ESTIRADO 49,21 (1 15/16")	1.882	-0,076	139550	49,21
AQM-47672	1018 RED. ESTIRADO 50,80 (2")	992	-0,076	139551	50,80
AQM-47672	1018 RED. ESTIRADO 50,80 (2")	992	-0,076	139551	50,80
OU-47832	1018 RED. ESTIRADO 50,80 (2")	992	-0,076	139621	50,80
PAJ-48073	1018 RED. ESTIRADO 49,21 (1 15/16")	694	-0,076	139755	49,21
PAJ-48073	1018 RED. ESTIRADO 50,80 (2")	988	-0,076	139754	50,80
MN-47094	1018 RED. ESTIRADO 50,80 (2")	994	-0,076	139815	50,80
PAR-48154	1018 RED. ESTIRADO 57,15 (2 1/4")	1.185	-0,076	139763	57,15
MJP-47896	1018 RED. ESTIRADO 50,80 (2")	3.264	-0,076	139780	50,80
MJP-47896	1018 RED. ESTIRADO 57,15 (2 1/4")	1.188	-0,076	139779	57,15

Composición química de la colada / Chemical Analysis of Heat

MEDIDA	OF	COLADA	C	Cr	Cu	Mn	Mo	N	P	S	Si
101,60	0,00	139585	0,150	0,000	0,000	0,600	0,000	0,003	0,010	0,000	0,100
69,85	0,00	138834	0,173	0,000	0,132	0,817	0,000	0,003	0,010	0,022	0,218
57,15	0,00	139149	0,179	0,000	0,103	0,776	0,000	0,003	0,012	0,024	0,207
57,15	0,00	139301	0,179	0,000	0,103	0,776	0,000	0,003	0,012	0,024	0,207
50,80	0,00	139307	0,470	0,187	0,000	0,760	0,003	0,012	0,010	0,197	0,218
69,85	0,00	139335	0,173	0,000	0,132	0,817	0,000	0,003	0,010	0,022	0,218
49,21	0,00	139399	0,177	0,000	0,119	0,787	0,000	0,002	0,013	0,022	0,201
50,80	0,00	139484	0,177	0,000	0,119	0,787	0,000	0,002	0,013	0,022	0,201
50,80	0,00	139485	0,179	0,000	0,103	0,776	0,000	0,003	0,012	0,024	0,207
57,15	0,00	139485	0,179	0,000	0,103	0,776	0,000	0,003	0,012	0,024	0,207
49,21	0,00	139550	0,177	0,000	0,119	0,787	0,000	0,002	0,013	0,022	0,201
50,80	0,00	139551	0,177	0,000	0,119	0,787	0,000	0,002	0,013	0,022	0,201
50,80	0,00	139621	0,177	0,000	0,119	0,787	0,000	0,002	0,013	0,022	0,201
49,21	0,00	139755	0,177	0,000	0,119	0,787	0,000	0,002	0,013	0,022	0,201
50,80	0,00	139754	0,177	0,000	0,119	0,787	0,000	0,002	0,013	0,022	0,201
50,80	0,00	139815	0,179	0,000	0,103	0,776	0,000	0,003	0,012	0,024	0,207
57,15	0,00	139780	0,177	0,000	0,103	0,776	0,000	0,003	0,012	0,024	0,207
50,80	0,00	139779	0,179	0,000	0,103	0,776	0,000	0,003	0,012	0,024	0,207

Características mecánicas / Mechanical properties



ARANA Y LUPARDO, 2  
48490 UGAO-MIRAVALLLES/MIZCAYA (SPAIN)  
Tfno.: 946480211  
Fax: 946480128  
Email: calpradera@calibradospradera.es  
www.calibradospradera.es

## CERTIFICADO DE CALIDAD/QUALITY REPORT

De acuerdo a /Made according to:

EN 10204/DIN 50049

3.1

Nº CERTIFICADO / CERTIFICATE NR.: 47901

ALBARAN 47901	CLIENTE LES ACIERS TRANSBEC (1997) LTÉE	CUSTOMER
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Normas : EN 10277 Productos Calibrados de acero. Condiciones técnicas de suministro.

Norm : Brighi steel products. Technical delivery conditions.

MECIDA	OF	COLADA	Resistencia Tens. strength N/mm <sup>2</sup>	Lím. elástico Yield point 0,2% N/mm <sup>2</sup>	Alargamiento Elongation Lo=50 mm.	Dureza HB Hardness HB
101,60	139585	41529	458,00	299,00	30,00	135,00
69,85	138834	41577 AG	457,00	0,00	0,00	0,00
57,15	139149	41574 AG	471,00	0,00	0,00	0,00
57,15	139301	41574 AG	471,00	0,00	0,00	0,00
50,80	139307	41479 AG	731,00	0,00	0,00	0,00
69,85	139335	41577 AG	457,00	0,00	0,00	0,00
49,21	139399	41607 AG	459,00	0,00	0,00	0,00
50,80	139484	41607 AG	459,00	0,00	0,00	0,00
57,15	139485	41574 AG	471,00	0,00	0,00	0,00
49,21	139550	41607 AG	459,00	0,00	0,00	0,00
50,80	139551	41607 AG	459,00	0,00	0,00	0,00
50,80	139621	41607 AG	459,00	0,00	0,00	0,00
49,21	139755	41607 AG	459,00	0,00	0,00	0,00
50,80	139754	41607 AG	459,00	0,00	0,00	0,00
50,80	139815	41607 AG	459,00	0,00	0,00	0,00
57,15	139763	41574 AG	471,00	0,00	0,00	0,00
50,80	139780	41607 AG	459,00	0,00	0,00	0,00
57,15	139779	41574 AG	471,00	0,00	0,00	0,00

Calidad Superficial

DESCRIPCIÓN	OF	Clase
Description		EN 10277-1

Observaciones: BARRAS DE ACERO ESTRADAS / TORNEADAS EN FRIO SIN ALEAR

DEPARTAMENTO DE CALIDAD: Certifica que el mencionado producto cumple con las especificaciones del pedido.

QUALITY DEPARTMENT: Certify that the product fulfills the order specifications.

Firmado: Susana Fernández  
Directora de Calidad

Fecha/Date: 21/06/2017





**SPECIFICATION CONTROL DRAWING**

PURCHASE MATERIAL: AISI 1018/1025 ROUND BAR

SPECIFICATION:

MIL-S-7097 OR ASTM A108

PART NUMBER:

M1018-R D.D.D. WHERE D.D.D. = DIAMETER IN INCHES  
DIA.

EG. 7/8" ROUND BAR = M1018-R0.875

TOLERANCES:

PER ASTM A108 AS FOLLOWS:

SIZE TOLERANCE  
UP TO 1.5" INCL. +0.000/-0.002  
OVER 1.5" TO 2.5" INCL. +0.000/-0.003  
OVER 2.5" TO 4.0" INCL. +0.000/-0.004  
OVER 4.0" TO 6.0" INCL. +0.000/-0.005  
OVER 6.0" TO 8.0" INCL. +0.000/-0.006

RELEASED  
11 2012-09-24

B	REFORMAT, ADD ASTM A108, ADD TOLERANCES	CP	12.09.05
A	NEW ISSUE	DS	01.06.12
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	CP		
CHECKED	CP		
MFG. APPR.	CP		
DE APPR.	CP		
DATE	12.09.05		
DART AEROSPACE LTD		REV. B	
HAWKESBURY, ONTARIO, CANADA		SHEET 1 OF 1	
DRAWING NO. M1018-R		SCALE NTS	
TITLE 1018-1025 ROUND BAR			
COPYRIGHT © 2001 BY DART AEROSPACE LTD			
ALL RIGHTS RESERVED. NO PART OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING.			

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/07/31</u>	DATE: _____

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/> Y	
CORRECT FINISH	<input checked="" type="checkbox"/> Y	
CORROSION	<input checked="" type="checkbox"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y	<u>ASTM A108</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y	
PHOTO REQUIRED	<input checked="" type="checkbox"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y	<u>HT. 134335</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/> Y	

MATERIAL: <u>M10180.750</u>	DATE: <u>18/07/31</u>
MATERIAL CERT REC'D: <u>4/23</u>	QUANTITY RECEIVED: <u>6'</u>
QUANTITY INSPECTED: <u>6'</u>	QUANTITY REJECTED: <u>0</u>
THICKNESS ORDERED: <u>2.750"</u>	THICKNESS RECEIVED: <u>2.750"</u>
SHEET SIZE ORDERED: <u>1</u>	SHEET SIZE RECEIVED: <u>1</u>
PO / BATCH NO.: <u>P0040517/5098041</u>	

MATERIAL RECEIPT INSPECTION FORM



Co 100897

Dart

80.18302

VIRAJ

# VIRAJ PROFILES LIMITED

Works: SURVEY NO.- 25/1, 25/2, 26 & 34, Village- MAAN, Taluka- PALGHAR, Dist.- THANE, MAHARASHTRA- 401 506, INDIA.  
c-mail- viciqec@viraj.com

## TEST CERTIFICATE

ORDER NO P005927  
PACKING LIST NO 64/75010019/6  
INSPECTION NO 100008469952  
DATE 29.06.2017

HEAT No 45264  
GRADE T-303

RUNBLE NO : 11007195956, 1100719595

## DESCRIPTION

STAINLESS STEEL BRIGHT BARS

PEELED & POLISHED

SIZE	SHAPE	TOLERANCE	LENGTH	PIECES	WEIGHT
2 1/2"	ROUND	ASTM A484	12' - 14'	10	2,016,000 LB

## CHEMICAL ANALYSIS

%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Cu	%Mo	%Co	%N2
0.0450	1.900	0.450	0.3020	0.0360	17.380	8.050	0.600	0.330	0.160	0.02400

## TEST RESULTS

0.2% yield strength ksi	Tensile strength ksi	Elongation %	Reduction of Area %	Hardness BHN	Grain Size NOS
42.0	86.0	42.0	63.0	178.0	6.0

## SPECIFICATION:

MATERIAL CONFORMS TO DIN 10083-3:2005 COND-A & ASTM A582/582M-12c1, ASTM A 388-05, ASTM A484-16, AMS 5640U TYPE I, EXCEPT MARKING, QSS-764B/2 COND A, EXCEPT MARKING, UNS-S-30300, ASTM A320/A320M-15a, RRF CLASS 1, ASME SA 320 B8F C1.1 MIL-S-862 B GRADE, ASTM 303 & WNR 1.4305, CERTIFIED AS PER EN 10204-3.1

## REMARKS

MATERIAL IS FREE FROM MERCURY CONTAMINATION, FREE FROM WELD OR WELD REPAIRS, MICROFREE FROM CONTINUOUS CARBIDE NETWORK ON GRAIN BOUNDARIES, MACROGOOD, MINIMUM SOLUTION ANNEALING TEMPERATURE 1050C, SOAKING TIME 01 HRS, WATER QUENCHED, MELT SOURCE: AOD, WE CONFIRM THAT THE MATERIAL HAS BEEN TESTED AND FOUND TO BE FREE FROM RADIOACTIVE CONTAMINATION, COUNTRY OF ORIGIN: INDIA.

We hereby certify that the material described above has been tested and complies with the terms of order/contract.

WORKS INSPECTOR  
K R K MURTHY

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 303SS ROUND BAR  
(NOTE: AISI 304/316 NOT ACCEPTABLE)

△ SPECIFICATION:  
PART NUMBER:

ASTM A582

M303R0.DDD  
DIA.

WHERE "D.DDD" = DIAMETER IN INCHES  
EG. 0.75" ROUND BAR = M303R0.750

RELEASED  
2010-02-02  
JMD

B	REFORMAT DWG. ADD SPECS (CN DR-1).	CP	10.01.05
A	NEW ISSUE	DS	01.12.20
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.01.05		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. M303R TITLE 303 ROUND BAR REV. B SHEET 1 OF 1 SCALE NTS COPYRIGHT © 2001 BY DART AEROSPACE LTD NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING.			

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

DC 18 INSPECTION	
ENGINEERING SIGNOFF (if required)	INSPECTED BY: _____
DATE: _____	SIGNED OFF BY: _____

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT MATERIAL PER M-DRAWING	Y	
CORRECT THICKNESS	Y	
PHOTO REQUIRED	X	
CORRECT REF # TO LINK CERT	Y	
CORRECT MATERIAL IDENTIFICATION	Y	
CORRECT M# ON THE MATERIAL	Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

17.45264

ASTM A582

MATERIAL CERT REC'D: <u>yes</u>	QUANTITY RECEIVED: <u>4'</u>	THICKNESS ORDERED: <u>2.50"</u>
QUANTITY INSPECTED: <u>4'</u>	QUANTITY REJECTED: <u>0</u>	THICKNESS RECEIVED: <u>2.50"</u>
DATE: <u>18/07/31</u>	PO / BATCH NO.: <u>PO040517/509804</u>	SHEET SIZE ORDERED: <u>—</u>
MATERIAL: <u>M303K2.500</u>		SHEET SIZE RECEIVED: <u>—</u>

# MATERIAL RECEIPT INSPECTION FORM



North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

*# 3462*  
*FESS-11G48304213*  
**METALLURGICAL TEST REPORT**

*PO, 14245*  
6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000  
*50267*

Certificate: 368166 2

Customer: 007036 016

Date: 1/08/2018 Page: 1

Steel: 304

Finish: 2B

Your Order: 4500847537

NAS Order: DS 0013262 01

Corrosion: ASTM A262/15 A; 180Bend-O

**PRODUCT DESCRIPTION:**

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED; UNS 30400  
ASTM A240/16a, A480/16b, A666/15; ASME SA240/17, SA480/17, SA666/17  
CHEM ONLY ON FOLLOWING ASTM: A276/17, A479/17, A484/16, A312/16  
CHEM ONLY ON FOLLOWING ASME: SA312/13, SA479/13  
AMS 5513J XMRK; MIL-S-5059D AMEND3 (X CROWN MEAS)  
NACE MR0175/ISO 15156-3:2009 A, MR0103/07; QGS766D-A X MAG PERM  
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

**REMARKS:**

Mat'l is Free of Mercury Contamination. No weld repairs.  
EN 10204:2004 3.1; ROHS 1 & 2 Compliant  
Material is Free of Radioactive Contamination  
Steel Making Process: EAF, AOD, & Cont. Casting  
Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001  
\*Melted & Manufactured in the USA; Mat'l is DPAHS Compliant

Product Id	Coil #	Std #	Thickness	Width	Weight	-----Length-----	Mark	Pieces	Commodity Code
02648C C	02648C C		.1200	48.0000	15,920	COIL	2	1	160009400

**CHEMICAL ANALYSIS**

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323  
Chemical Analysis per ASTM A751/14a

HEAT	CM	C %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %
648C	US	.0442	18.1730	.4155	1.7665	.3340	.0509	8.1115	.0335	.0010
SI %										
.2490										

**MECHANICAL PROPERTIES**

Product Id#	Coil #	1 d o i c i	UTS KSI	20C .2% YS KSI	20C ELONG %-2"	Hard RB	Tail Hard
02648C C	02648C C	F T	97.43	46.94	51.44	87.50	86.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.

KRIS LARK

1/08/2018

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET  
ANNEALED

SPECIFICATION:  
MIL-S-5059  
OR AMS 5513/304  
OR AMS 5524 (316)  
OR ASTM A240  
OR ASME SA240

FINISH:

DART M-NUMBER  
IDENTIFIER  
FINISH  
UNPOLISHED No. 1  
UNPOLISHED No. 2D  
UNPOLISHED No. 2B  
POLISHED No. 3  
POLISHED No. 4  
BUFFED No. 6  
BUFFED No. 7  
BUFFED No. 8  
8P

PART NUMBER:

M304S/TT GA #P  
GA

WHERE "TT" = GAUGE THICKNESS  
WHERE "#P" = FINISH IDENTIFIER

EG. 16 GAUGE SS SHEET 2B FINISH = M304S16GA  
EG. 16 GAUGE SS SHEET No. 4 POLISHED = M304S16GA4P

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
28	0.01875	0.0178 - 0.019
26	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.041	0.040 - 0.046
18	0.045375	0.044 - 0.052
17	0.050	0.047 - 0.058
16	0.05625	0.053 - 0.065
15	0.0625	0.059 - 0.072
14	0.0703125	0.066 - 0.077
13	0.076125	0.073 - 0.083
12	0.08375	0.084 - 0.098
11	0.109375	0.089 - 0.114
10	0.125	0.115 - 0.130
9	0.140625	0.131 - 0.145
8	0.15625	0.146 - 0.160
7	0.171875	0.161 - 0.176
6	0.1875	0.182 - 0.194
5	0.2031	0.194 - 0.212
4	0.2188	0.201 - 0.228
3	0.2344	0.225 - 0.243
2	0.2500	0.238 - 0.262
1	0.2656	0.254 - 0.278
0	0.2813	0.269 - 0.293
0	0.3125	0.301 - 0.325

D

RELEASED  
2015 FEB 04  
ECN 15-522 97

D	ADDED GAUGES 0-7	A/S	15.01.06
C	DEFINED FINISH OPTION (ZN CR AND EXAMPLE OF MATERIAL FIN WITH FINISH OTHER THAN 2B (ZN B5).	MB	17.09.20
B	REFORMAT DMC ADD STATISATC SPECS (ZN D8-1). ADD GAUGE REF (D8-1). REF PAR 08/02/04	CP	09.06.01
A	NEW ISSUE	DS	01.09.24
DESIGN	DESCRIPTION	BY	DATE
DRAWN	DS		
CHECKED	A/S		
MFG. APPR			
APPROVED			
DE APPR			
DATE	15.01.06		

DART AEROSPACE LTD  
HAMWESBURY, ONTARIO, CANADA  
DRAWING NO  
M304S  
304/316 SS SHEET  
REV. D  
SHEET 1 OF 1  
SCALE  
NTS



# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: <u>M304S116A</u>	DATE: <u>18/08/02</u>
MATERIAL CERT REC'D: <u>Yes</u>	QUANTITY RECEIVED: <u>3216</u>
QUANTITY INSPECTED: <u>3216</u>	QUANTITY REJECTED: <u>0</u>
THICKNESS ORDERED: <u>0.125"</u>	THICKNESS RECEIVED: <u>0.125"</u>
THICKNESS ORDERED: <u>4x8"</u>	SHEET SIZE ORDERED: <u>4x8"</u>
THICKNESS ORDERED: <u>10.125"</u>	SHEET SIZE RECEIVED: <u>4x8"</u>
PO / BATCH NO.: <u>P0040517/5098678</u>	

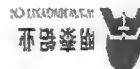
DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	
CORROSION	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	<u>AMS 5512</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/>	
PHOTO REQUIRED	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	<u>HT: 618</u>
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER

Testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/08/02</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



ZHENGZHOU MINGTAI INDUSTRY CO., LTD  
NO.6 CHANGCHUN ROAD, HIGH AND NEW TECHNOLOGY  
ZONE, ZHENGZHOU HENAN CHINA

TEL: 371-67898611 FAX: 371-67898612

### INSPECTION CERTIFICATE

INVOICE NO.: Z-RYWP180410  
CONTRACT NUMBER: 4500870119/4500871847  
LOADING PORT: QINGDAO, CHINA  
DESTINATION: TORONTO, CANADA  
SHIPPING MARKS: N/M  
DATE: 4/08/18

DESCRIPTION OF GOODS:  
ALUMINIUM SHEETS AND COILS ALLOY 3003/H14 AND 5052/H32  
P.O. NO.: 4500870119/4500871847  
DAP TORONTO, CANADA

ACTUAL MILL CHEMICAL UNIT: %													
Alloy No.	Temper	Lot No.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others	Al	
			STANDARD										
3003	H14	GFB1803W30080	0.167	0.591	0.137	1.178	0.016	0.009	0.004	0.037	0.15	REMAIN	
STANDARD			0.6	0.7	0.05-0.2	1.0-1.5	-	-	0.1	-	0.15	REMAIN	
5052	H32	GFB1803W50092	0.097	0.300	0.019	0.057	2.462	0.205	0.023	0.017	0.15	REMAIN	
5052	H32	GFB1803W50097	0.114	0.294	0.026	0.045	2.338	0.180	0.024	0.016	0.15	REMAIN	
5052	H32	GFD1803W50054	0.085	0.274	0.011	0.038	2.451	0.195	0.011	0.022	0.15	REMAIN	
MECHANICAL PROPERTY TEST REPORTS													
Alloy No.	Temper	Lot No.	SIZE(MM)	SIZE(IN)	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)						
STANDARD								138-179	min118	144	149	214-262	min5
3003	H14	GFB1803W30080	3.175*1524*3658	.125*60*144									
STANDARD								236	236	186	186	236	min5
5052	H32	GFB1803W50092	2.54*1219°C	.100*48°C									
5052	H32	GFB1803W50097	1.016*1219*2438	.040*48*96									
5052	H32	GFD1803W50054	4.826*1524*3048	.190*60*120									

We certify that 3003H14 material complies with ASTM B209-14, AMS QQA 250/2, AMS 4008K standard.  
We certify that 5052H32 material complies with ASTM B209-14, AMS QQA 250/8B, AMS 4016 M standard.

ZHENGZHOU MINGTAI INDUSTRY CO., LTD  
郑州明泰实业有限公司

魏真茹

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 5052-H32 ALUMINUM SHEET  
 SPECIFICATION: QQ-A-250/8 OR AMS-QQ-A-250/8  
 OR AMS-QQ-A-250/8  
 OR ASTM B209

PART NUMBER: M5052H32S XXX THK

WHERE "XXX" = SHEET THICKNESS (IN INCHES)  
 EG. 0.063" THICK SHEET = M5052H32.063  
 PREFERRED SIZE: .XXX BY 4FT BY 8FT

**RELEASED**  
 2009-10-30  
*IMP*

REV	DESCRIPTION	DATE
A	REFORMAT DWG. ADD B209 SPEC (2H.DI.1) PAS 06-02-04	09-09-26
B	NEW ISSUE	DS 01-06-08
DESIGN	DART AEROSPACE LTD	BY DATE
DRAWN	HAWKESBURY, ONTARIO, CANADA	
CHECKED	DRAWING NO.	REV/B
MFG. APPR.	M5052H32S	SHEET 1 OF 1
APPROVED	TITLE	SCALE
DE APPR.	5052-H32 SHEET SPEC	NTS
DATE	09-09-26	

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Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION	
ENGINEERING SIGNOFF (if required)	INSPECTED BY: <u>AT</u>
SIGNED OFF BY:	DATE: <u>18/08/07</u>

Testers located in the Quality Office

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	
CORROSION	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	ASTM B209
CORRECT THICKNESS	<input checked="" type="checkbox"/>	
PHOTO REQUIRED	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	HT: 65FB1803W500A7
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/>	

MATERIAL: <u>M5052H325.040</u>	DATE: <u>18/08/07</u>
MATERIAL CERT REC'D: <u>Yes</u>	QUANTITY RECEIVED: <u>325f</u>
QUANTITY INSPECTED: <u>325f</u>	QUANTITY REJECTED: <u>0</u>
THICKNESS ORDERED: <u>0.040"</u>	THICKNESS RECEIVED: <u>0.040"</u>
THICKNESS ORDERED: <u>4x8'</u>	THICKNESS RECEIVED: <u>4x8'</u>
PO / BATCH NO.: <u>P0040517 / 5094478</u>	SHEET SIZE RECEIVED: <u>4x8'</u>

# MATERIAL RECEIPT INSPECTION FORM

49570  
1992



GLOBAL VIETNAM ALUMINIUM COMPANY LIMITED

Address: My Xuan B1 - Conac Industrial zone, My Xuan town, Tan Thanh district,  
Ba Ria-Vung Tau province, Viet Nam  
Tel: +84(0)643924954  
Fax: +84(0)643924953

# MILL TEST CERTIFICATE

Date: January 19, 2017

PO number: 16-P-421  
Customer PO: Inventory  
Shipping Ref No: 17-0046  
I.C. No: DC HMN710232  
Date of issue: January 18, 2017  
Item Code: 1043103  
Die Number: 1000005  
Alloy & Temper: 6061-T6  
Production Description: Round Bar 1.25"x 20' 6061-T6 D00005  
Length (inch): 240  
Bundle number: 16-P-421-090, 16-P-421-091, 16-P-421-092, 16-P-421-093, 16-P-421-094  
Heat Number: SXE162069  
Date: 10/01/2017  
Applicable Specifications: ASTM B221 STANDARDS  
CHEMICAL ANALYSIS: %

Si	Mg	Fe	Cu	Mn	Cr	Zn	Ti	Al	Other		Remark:
0.637	0.921	0.230	0.243	0.022	0.087	0.012	0.019	98.737	EACH	TOTAL	
											07/01/2017

## MECHANICAL ANALYSIS:

Ult. Strength (ksi)	Yield Strength (ksi)	Elongation % LN 2"	Remark:
39.1	36.2	10.8	07/01/2017

All profiles, each profile with each MTC, showing material shipped match aluminum alloy as per standard, with chemical analysis and mechanical analysis to match aluminum alloy standard.  
We hereby certify that the item listed have been checked and tested in accordance with the specifications noted and have been found to meet all the applicable requirements. Certifications are kept on file for 36 months from the date of purchase and are available for review upon request, referring to ASTM and the PO number.

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR

SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221

PART NUMBER: M6061T6R(D,DDD)  
DIA.

WHERE "D,DDD" = DIAMETER IN INCHES

EG. 5/8" ROUND BAR = M6061T6R0.625

**RELEASED**  
2009-09-09  
MFD

B	REFORMAT DWG. ADD B211 & B221 SPEC (2N DB-1), REF PAR 08-020A	CP	09.07.13
A	NEW ISSUE	DS	01.06.08
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.07.13		

DART AEROSPACE LTD HAMMERSBURY, ONTARIO, CANADA	
DRAWING NO. M6061T6R	REV. B
TITLE 6061-T6 ROUND BAR	SHEET 1 OF 1
SCALE NTS	

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ALL RIGHTS RESERVED BY DART AEROSPACE LTD.

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/07/31</u>	DATE: _____

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> N	
CORROSION	<input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> N	<u>ASTM B221</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/> N	
PHOTO REQUIRED	<input checked="" type="checkbox"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> N	<u>HT. 5x5/6 2069</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/> Y	

MATERIAL CERT REC'D: <u>Yes</u>	MATERIAL: <u>M661T6E1.250</u>
QUANTITY RECEIVED: <u>20'</u>	DATE: <u>18/07/31</u>
QUANTITY INSPECTED: <u>20'</u>	
QUANTITY REJECTED: <u>0</u>	
THICKNESS ORDERED: <u>1.250"</u>	PO / BATCH NO.: <u>0040517/50980-13</u>
THICKNESS RECEIVED: <u>1.250"</u>	
SHEET SIZE ORDERED: <u>—</u>	
SHEET SIZE RECEIVED: <u>—</u>	

MATERIAL RECEIPT INSPECTION FORM



Quality Manager

All profiles, showing material shipped match aluminium alloy as per standard, with chemical analysis to match aluminium alloy standard.  
 We hereby certify that the item listed have been checked and tested in accordance with the specifications noted and have been found to meet all the applicable requirements. Certifications are kept on file for 36 months from the date of purchase and are available for review upon request, referring to ASTM and the PO number.

Ulc. Strength (ksi)	42.3	Yield Strength (ksi)	38.5	Elongation % LN 2"	11.4	Remark:	08/05/2017
---------------------	------	----------------------	------	--------------------	------	---------	------------

MECHANICAL ANALYSIS:

Si	0.609	Mg	0.952	Fe	0.247	Cu	0.272	Mn	0.018	Cr	0.096	Zn	0.011	Ti	0.020	Al	97.678	Other	<0.05	TOTAL	<0.10	Remark:	08/05/2017
----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	--------	-------	-------	-------	-------	---------	------------

CHEMICAL ANALYSIS: %

Applicable Specifications: ASTM B221 STANDARDS

PO number: P-17529  
 Shipping Ref No.: 17-2204  
 LC No.: DC HMN714466  
 Date of issue: October 31, 2017  
 Item Code: 1927100  
 Die Number: D00227  
 Alloy & Temper: 6061-T6  
 Production Description: Flat Bar 1"x2"x 240" 6061-T6 D00227  
 Length (inch): 240  
 Bundle number: P-17529-007  
 Heat Number: SXE171892  
 Date: 10/05/2017

Date: November 17, 2017

MILL TEST CERTIFICATE

Address: MY XUAN BI-CONAC INDUSTRIAL ZONE, MY XUAN TOWN, TAN THANH DISTRICT,  
 BA RIA VUNG TAU PROVINCE, VIETNAM  
 Tel: +84(0)643924954  
 Fax: +84(0)643924953

GLOBAL VIETNAM ALUMINIUM COMPANY LIMITED

Global Vietnam  
 Aluminium Co., Ltd



49541

TR4-1643

#2447 FAL-12-V



# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL 6061-T6 T6510/T6511/T62 ALUMINUM BAR

SPECIFICATION:  
 QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 417/4128/415/4116)  
 OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
 OR ASTM B211 OR ASTM B221

PART NUMBER:

M6061T6B | T.TTT | X | WWW.WWW/  
 THICK | WIDTH

WHERE "T.TTT" = THICKNESS IN INCHES  
 "WWW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

REV	DESCRIPTION	DATE
B	REMOVE QQ-A-250/11 OPTION, REFORMAT NOTES, ADD ASTM B211B221 (2N D7-1)	08.07.13
A	NEW ISSUE	DS 01.06.08
DESIGN	DS	
DRAWN	DS	
CHECKED	DS	
MFG. APPR.	DS	
APPROVED	DS	
DE APPR.	DS	
DATE	09.07.13	

DART AEROSPACE LTD	
DRAWING NO.	M6061T6B
TITLE	6061-T6 BAR
COMPONENT Q 2001 BY DART AEROSPACE LTD	
REVISION	REV. B
SHEET 1 OF 1	SCALE
NTS	

RELEASED  
 2009-08-03  
 JMD

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/07/31</u>	DATE: _____

Testers located in the Quality Office

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.	RECORD RESULTS BELOW			
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/> Y	
CORRECT FINISH	<input checked="" type="checkbox"/> Y	
CORROSION	<input checked="" type="checkbox"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y	ASTM B211
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y	
PHOTO REQUIRED	<input checked="" type="checkbox"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y	MT: 5X F171892
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/> Y	

MATERIAL: <u>M6061 T6 B1.000x2.000</u>	DATE: <u>18/07/31</u>
MATERIAL CERT REC'D: <u>Yes</u>	QUANTITY RECEIVED: <u>20'</u>
	QUANTITY INSPECTED: <u>20'</u>
	QUANTITY REJECTED: <u>0</u>
THICKNESS ORDERED: <u>1.000</u>	THICKNESS RECEIVED: <u>1.000</u>
SHEET SIZE ORDERED: <u>—</u>	SHEET SIZE RECEIVED: <u>—</u>
PO / BATCH NO.: <u>P0040517/5098045</u>	

MATERIAL RECEIPT INSPECTION FORM

P.O. 18292

51743

#2620

*Best in Class*

CUSTOMER PO NUMBER: 4500826375-1		CUSTOMER PART NUMBER: 160001303		PRODUCT DESCRIPTION: .375 X .750 SC RECT BAR			
LINE ITEM: 001		SHIP DATE: 07/21/2017		ALLOY: 6061		TEMPER: T6511	
WEIGHT SHIPPED: 523.000 LB		QUANTITY: 132.000 PCS		DIA/DIA/T/HKNS:		WIDTH: 12.000 FT	
		B/L NUMBER: 619760					

Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CONDUCT.	BEND
HK147-197	0001	0001	46.8	42.1	19.4	RE 96	N/A	N/A
HK147-197	0001	0002	46.5	41.9	18.7	RE 96	N/A	N/A
HK147-197	0001	0003	46.8	41.7	20.6	RE 96	N/A	N/A
HK147-197	0001	0004	46.4	41.0	20.0	RE 97	N/A	N/A
HK147-197	0001	0005	46.2	41.4	19.8	RE 97	N/A	N/A
HK147-197	0001	0006	46.8	41.4	19.6	RE 97	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	SI	Fe	Cu	Mn	Mg	Cr	Zn	TI	Pb	BI	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	0.00
A38735	.71	.34	.27	.11	.99	.10	.05	.02	.00	.00	.00	.01	.03

Applicable Requirements:

ASTM-B221-14 STENCILED ASME-SB221 2009 SECT II AMS-QQ-A-200/8A UNS#A96061 (T6511 also conforms to T6-not applicable to other tempers)

Miscellaneous Notes

MANUFACTURED IN USA (COMMERCE, CA) MELTED IN USA  
OF ITS COMPOUNDS ARE UTILIZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.  
MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY



**CERTIFIED TEST REPORT**

*Best in Class*

**CERTIFICATION**

Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

Almee L. Macnowski, Quality & Technology Manager

*Almee L. Macnowski*

Plant Serial: 00295392  
Order Number: 6035138  
Line Item: 001

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/7075-T6 ALUMINUM BAR

SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221

PART NUMBER:

M6061T6B | T.TTT | X | WW.WWW |  
THICK | WIDTH

WHERE "T.TTT" = THICKNESS IN INCHES  
"WW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

B	REMOVE QQ-A-250/11 OPTION, REFORMAT NOTES, ADD ASTM B211/B221 (2ND-1)	CP	09.07.13
A	NEW ISSUE	DS	01.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	47		
CHECKED	AS		
MFG. APPR.	MS		
APPROVED	MS		
DE APPR.	MS		
DATE	09.07.13		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. M6061T6B  
TITLE 6061-T6 BAR  
REV. B  
SHEET 1 OF 1  
SCALE NTS

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RELEASED  
2009-06-03  
MSD

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6017660.375X0.750 DATE: 18/08/01  
 QUANTITY RECEIVED: 20' QUANTITY INSPECTED: 20' QUANTITY REJECTED: 0  
 THICKNESS ORDERED: 0.375" THICKNESS RECEIVED: 0.375" SHEET SIZE ORDERED: - SHEET SIZE RECEIVED: -  
 PO / BATCH NO.: 10517/50980-16

DESCRIPTION	NCR (Check Y/N)	COMMENTS
-------------	-----------------	----------

SURFACE DAMAGE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORRECT FINISH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORROSION	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORRECT THICKNESS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PHOTO REQUIRED	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D
	WEBSTER			

Testers located in the Quality Office

QC 18 INSPECTION ENGINEERING SIGNOFF (if required)

INSPECTED BY: AT SIGNED OFF BY: \_\_\_\_\_

DATE: 18/08/01

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



GLOBAL VIETNAM ALUMINIUM CO., LTD  
 11/11/2018 15:30

Quality Manager

All profiles, showing material shipped match aluminum alloy as per standard, with chemical analysis to match aluminum alloy standard.  
 We hereby certify that the item listed have been checked and tested in accordance with the specifications noted and have been found to meet all the applicable requirements. Certifications are kept on file for 36 months from the date of purchase and are available for review upon request, referring to ASTM and the PO number.

Ult. Strength (ksi)	40.8
Yield Strength (ksi)	35.1
Elongation % LN 2"	10.5
Remark:	05/01/2018

MECHANICAL ANALYSIS:

Si	0.661	Mg	0.987	Fe	0.240	Cu	0.258	Mn	0.025	Cr	0.074	Zn	0.013	Ti	0.017	Al	97.634	Other	<0.05	TOTAL	<0.10	Remark:	05/01/2018
----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	-------	----	--------	-------	-------	-------	-------	---------	------------

CHEMICAL ANALYSIS: %

Applicable Specifications: ASTM B22 STANDARDS

PO number: P-17722-1  
 Shipping Ref No.: 18-0207  
 I.C No.: DC HMN810289  
 Date of issue: January 23, 2018  
 Item Code: 1094300  
 Die Number: D00214  
 Alloy & Temper: 6061-T6  
 Production Description: ALUMINIUM EXTRUDED PROFILES  
 BAR SE RECT .500"X2.000"X 240" 6061-T6 D00214  
 Length (inch): 240  
 Bundle number: P-17722-025  
 Heat Number: SXE180043  
 Date: 08/01/2018

Date: February 12, 2018

MILL TEST CERTIFICATE

Address: MY XUAN BI-CONAC INDUSTRIAL ZONE, MY XUAN TOWN, TAN THANH DISTRICT,  
 BA RIA VUNG TAU PROVINCE, VIET NAM  
 Tel: +84(0)643924954  
 Fax: +84(0)643924953

GLOBAL VIETNAM ALUMINIUM COMPANY LIMITED



2481  
 FAL-122  
 50708  
 TRA-2561

FAL 122

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR

SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221

PART NUMBER:

M6061T6B T.TTT X WWW.WWW  
THICK WIDTH

WHERE "T.TTT" = THICKNESS IN INCHES  
"WWW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

B	REMOVE QQ-A-250/11 OPTION, REFORMAT NOTES, ADD ASTM B211/B221 (ZIN D7-1)	CP	09.07.13
A	NEW ISSUE	DS	01.09.08
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	DS		
CHECKED	ASS		
MFG. APPR.	ASS		
APPROVED	ASS		
DE APPR.	ASS		
DATE	09.07.13		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA  
DRAWING NO. M6061T6B  
TITLE 6061-T6 BAR  
REV. B  
SHEET 1 OF 1  
SCALE  
NTS

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**RELEASED**  
2009-05-03  
MD

MATERIAL: M606176130.500x0.2.00	DATE: 18/08/01
MATERIAL CERT REC'D: Yes	QUANTITY RECEIVED: 20'
QUANTITY INSPECTED: 20'	QUANTITY REJECTED: 0
PO / BATCH NO.: P040517/5098047	
THICKNESS ORDERED: 0.500"	THICKNESS RECEIVED: 0.500"
SHEET SIZE ORDERED: —	SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="radio"/> Y	
CORRECT FINISH	<input checked="" type="radio"/> Y	
CORROSION	<input checked="" type="radio"/> Y	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	ASTM A276
CORRECT THICKNESS	<input checked="" type="radio"/> Y	
PHOTO REQUIRED	<input checked="" type="radio"/> Y	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	MT-S&E 180413
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="radio"/> Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.					RECORD RESULTS BELOW				
					HRC	HRB	DUR A	DUR D	WEBSTER
					TYPE OF MATERIAL				
					SIZE OF TEST SAMPLE				
					HARDNESS / DUROMETER READING				

QC 18 INSPECTION	INSPECTED BY: <u>AT</u>	DATE: <u>18/08/01</u>
ENGINEERING SIGNOFF (if required)	SIGNED OFF BY:	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



#2592  
FAL-342  
P.O. 1443  
50328



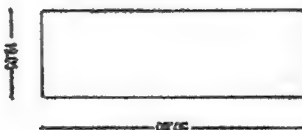
LB ALUMINIUM BERHAD (138535-V)



# MILL CERTIFICATE

SECTION NO.: PE01431MF06100	DATE: Oct-30-2017	SALES ORDER NO.: 1817448	WORK ORDER: 770728	ALLOY: 6061-T6511	CERTIFICATE NO.: CN1714144	CUSTOMER PO NO.: P207292
		PRESS NO.: 2600	EXTRUSION DATE: Oct-25-2017			

Section Sketch :



CHEMICAL COMPOSITION									
Compliance with ASTM B221M-07									
We hereby certify that the material covered by this report has been verified or tested according to the latest standard sampling method of the requirements of any specifications or requirements described therein, and that sample representative of the material and the composition limits. Also, note that mercury is not a normal constituent in aluminum alloy. Neither mercury nor any of its compounds are used in the manufacture of our									
extension. This certificate conforms to 3.1, EN 10204									
Analysis Ref. E7H5904A Sep-10-2017									
Remainder									
Actual									
Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	
0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00		
Min									
0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15		
Max									
0.670	0.180	0.350	0.030	1.010	0.080	0.010	0.010		

\*\* This certificate of Analysis has been produced electronically and is valid without signature \*\*

314 x 2

Lot 11, Jalan Perusahaan 1, Kawasan Perusahaan Beranang, 43700 Beranang, Selangor Darul Ehsan, Malaysia.  
Tel: 603-8725 8822 (15 Lines) Fax: 603-8725 8828 (General), 8725 8833 (Sales), 8725 8866 (Export)  
Enquiry@lbalum.com.my www.lbalum.com

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR

SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/415/416)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221

PART NUMBER:

M6061T6B | T.TTT | X | WW.WWW |  
THICK | WIDTH

WHERE "T.TTT" = THICKNESS IN INCHES  
"WW.WWW" = WIDTH IN INCHES  
E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

DESIGN	DS	DESCRIPTION	CP	09.07.13
DRAWN	DS	DART AEROSPACE LTD	DS	01.06.08
CHECKED	DS	HAWKESBURY, ONTARIO, CANADA	BY	DATE
MFG. APPR.	DS	DRAWING NO.	REV. B	
APPROVED	DS	M6061T6B	SHEET 1 OF 1	
DE APPR.	DS	TITLE	SCALE	
DATE	09.07.13	6061-T6 BAR	NTS	

RELEASED  
2009-05-03  
M2

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NO TO BE USED FOR ANY PURPOSES OTHER THAN THE ORIGINAL INTENT.



Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/08/01</u>	DATE: _____

Testers located in the Quality Office

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	
CORROSION	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	<u>ASTM B221</u>
CORRECT THICKNESS	<input checked="" type="checkbox"/>	
PHOTO REQUIRED	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	<u>HT: CN1711144</u>
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	
CORRECT # ON THE MATERIAL	<input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input checked="" type="checkbox"/>	

MATERIAL CERT REC'D: <u>Yes</u>	QUANTITY RECEIVED: <u>20'</u>	THICKNESS ORDERED: <u>0.750"</u>
QUANTITY INSPECTED: <u>20'</u>	QUANTITY REJECTED: <u>0</u>	THICKNESS RECEIVED: <u>0.750"</u>
DATE: <u>18/08/01</u>	PO / BATCH NO.: <u>P0040517/5098048</u>	SHEET SIZE ORDERED: <u>—</u>
MATERIAL: <u>M6061 T662.750 x 02.000</u>		SHEET SIZE RECEIVED: <u>—</u>

MATERIAL RECEIPT INSPECTION FORM

2445  
 FAL-1123  
 51350  
 TNA 2347



GVA

GLOBAL VIETNAM ALUMINIUM COMPANY LIMITED

Address: MY XUAN BI-CONAC INDUSTRIAL ZONE, MY XUAN TOWN, TAN THUANH DISTRICT,  
 BA RIA VUNG TAU PROVINCE, VIET NAM  
 Tel: +84(0)643924954  
 Fax: +84(0)643924953

# MILL TEST CERTIFICATE

Date: April 26<sup>th</sup>, 2018

PO number: P-18057  
 Shipping Ref No.: 18-0817  
 LC No.: DC HMN811301  
 Date of Issue: April 10, 2018  
 Item Code: 1931000  
 Die Number: D00141  
 Alloy & Temper: 6061-T6  
 Production Description: ALUMINIUM EXTRUDED PROFILES  
 Flat Bar 1.5" x 3" x 240" 6061-T6 D00141  
 Length (inch): 240  
 Bundle number: P-18057-008, P-18057-007  
 Heat Number: SXXF180264  
 Date: 01/03/2018  
 Applicable Specifications: ASTM B221 STANDARDS  
 CHEMICAL ANALYSIS: %

Si	Mg	Fe	Cu	Mn	Cr	Zn	Ti	Al	Other	Remark:
0.598	0.900	0.211	0.251	0.016	0.096	0.033	0.019	98.282	<0.05	26/02/2018
TOTAL										Remark:

## MECHANICAL ANALYSIS:

U.T. Strength (ksi)	Yield Strength (ksi)	Elongation % L.N 2"	Remark:
38.6	35.3	10.5	26/02/2018

All profiles, showing material shipped match aluminium alloy as per standard, with chemical analysis to match aluminium alloy standard.  
 We hereby certify that the item listed have been checked and tested in accordance with the specifications noted and have been found to meet all the applicable requirements. Certifications are kept on file for 36 months from the date of purchase and are available for review upon request, referring to ASTM and the PO number.

Quality Manager



TRUNG TÂM KIỂM NGHIỆM CÔNG TY  
 TNHH NHÔM TOÀN CẦU VIỆT NAM  
 GLOBAL VIETNAM ALUMINIUM  
 CO., LTD TESTING CENTER

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR  
 SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/415/416)  
 OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
 OR ASTM B211 OR ASTM B221

PART NUMBER:

M6061T6B T.TT X WWW.WWW/

THICK WIDTH

WHERE "T.TT" = THICKNESS IN INCHES  
 WWW.WWW = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

RELEASED  
 2009-06-03  
 1172

REV.	A	B	DESCRIPTION	CP	DS	BY	DATE
			REMOVE QQ-A-250/1 OPTION, REFORMAT NOTES, ADD ASTM B211/B221 (Zn D7-1)				09.07.13
			NEW ISSUE				01.06.08
DESIGN		DS					
DRAWN		AS					
CHECKED		AS					
MFG. APPR.		MP					
APPROVED		MP					
DE APPR.		MP					
DATE		09.07.13					

**DART AEROSPACE LTD**  
 HAWKESBURY, ONTARIO, CANADA  
 DRAWING NO. M6061T6B  
 TITLE 6061-T6 BAR  
 REV. B  
 SHEET 1 OF 1  
 SCALE NTS

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MATERIAL:	M60617613.000.01.500	PO / BATCH NO.:	6040517/5098049
DATE:	18/08/01		
MATERIAL CERT REC'D:	121	THICKNESS ORDERED:	1.500"
QUANTITY RECEIVED:	121	THICKNESS RECEIVED:	1.500"
QUANTITY INSPECTED:	121	SHEET SIZE ORDERED:	—
QUANTITY REJECTED:	0	SHEET SIZE RECEIVED:	—

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

QC 18 INSPECTION	INSPECTED BY:		DATE:	(18/08/01)
ENGINEERING SIGNOFF (if required)	SIGNED OFF BY:		DATE:	

H:\FORMS\Quality Assurance\approved QA\MRIF Material Receipt Inspection Form revd

3131

160897

18289 N

CERTIFIED INSPECTION REPORT

Arconic

DAVENPORT WORKS 4879 State Street Bellendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material and the composition limits and that the mechanical properties shown on the face of this sheet. This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

S. Narayana  
Manufacturing Director - Davenport & Satellite

Terrence Thom  
Quality Assurance Manager

3492108	0	Invoice No.	Arconic No.	Item	DPE-04407-1
Ship Date	B.I. No.	11728360	00000	Customer	Arconic Item
2018-05-03	P.O. No./Govt Contract No.	U10844	Ln# : 1		

Item Description  
0.04 IN TK (+0.0000 - .0035) X 48.0 IN W (+.125 - .125) X 144.0 IN LN (+.15625 - .15625) CAT D 126862 (N) A/T 6061-T6 FLAT SHEET FOR DISTRIBUTORS TOLERANCE GUARANTEED. AMS4027 REV N ANS1135.2 REV 2017 EXC\_MRX ASME-SB-209 REV 15 EXC\_MRX ASTM209 REV 14 ((MARKED)) KRAFT PAPER INTERLEAVED MAX GROSS SKID WGT: 4750 LB QUAN TOL +/- 10 % COR D126862 REV 44 CUST REQ 18-05-01 \*\*\* W/E 18-08-04 \*\*\*

Num	Package Ticket	Lot	Weight	Quantity	UOM	Inspector	Clock Numbers
1	445006	463231	3908	154	PC	27887	46940

Notes for COR: D126862.44  
PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS4027 REV N ALSO MEET THE REQUIREMENTS OF AMS-QQ-A-250\_11 ORIGINAL REVISIO N DATED 1997-08-01.

COR: D126862.44 -Specification Limits

Temp	Dir	UTS	TYS	ELAD
T6	Long Transv.	KSI	KSI	PCT
	Max			
	Min	42.0	35.0	10

Chemical Composition										Other	Other
	SI	FE	CU	MN	MG	CR	ZN	TI	Each	Total	Aluminum
Alloy 6061	Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15
Lot: 463231	Min	0.40	0.15	0.8	0.04						REMAIN
- Mechanical, Physical, Metallography, Quantometer Results	-----										
Temp	No->	UTS	TYS	ELAD							
T6	Test	KSI	KSI	PCT							
Long Transv.	10	48.8	41	12							

# CERTIFIED INSPECTION REPORT

Arconic

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet. This last report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

S. M. Nelson  
Manufacturing Director - Davenport & Satellite

Terrance Thom  
Quality Assurance Manager

3492108	0			
Ship Date	B.I. No.	Invoice No.	Arconic No.	Item
2018-05-03	11728360	00000	1001004407-1	DPE-04407-1
P.O. No./Govt Contract No.	Customer		Arconic Item	
U10844	Ln#: 1			

Page 2 of 2

Lot: 463231 - Mechanical, Physical, Metallurgy, Quantometer Results (cont.) -----

49.3	41.5	12						
49.1	41	12.4						
49.2	41.5	12.1						
48.7	40.8	12.1						
48.8	40.8	12.3						
48.8	41	12						
48.8	40.8	12						
48.8	40.6	12.5						
48.6	40.5	12.5						

Cast Number	Chemical	OES	SI	FE	CU	MN	MG	CR	ZN	TI	Other	Each	Other	Total
H3451082	Actuals	0.60	0.4	0.22	0.05	1.0	0.16	0.04	0.04	< 0.05	< 0.15			

This material was melted in the United States or a Qualifying Country [RSP DEARS 225.872.1(a)]; it was manufactured in the United States



**SPECIFICATION CONTROL DRAWING**

△ PURCHASE MATERIAL: 6061-T6 6217651 ALUMINUM SHEET OR PLATE

SPECIFICATION:  
QC-A-250/11 OR AMS-QQ-A-250/11  
OR AMS 4025 OR 4027  
OR ASTM B209

△ PART NUMBER:  
M6061T6S | XXX | X | W | WWW |  
| THK | | WIDTH |

WHERE : "XXX" = THICKNESS (IN INCHES)  
AND "W,WWW" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)

EG. 0.003" THICK SHEET = M6061T6S.063  
EG. 3.5" WIDE BY 0.500" THICK PLATE = M6061T6S.500X3.500

△ PREFERRED SIZE:  
.XXX BY 4FT BY 8FT FOR SHEET

2018 MAR 13  
REV 18-606

APPROVED

C	ADD PLATE AND T6S1 SPEC	ML	17.12.13
B	REFORMAT DWG, ADD B209 SPEC (ZN DB-1), REF PAR 08-020A	CP	09.07.13
A	NEW ISSUE	RF	01.06.08
REV	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	ML		
CHECKED	NO		
MFG. APPR.	JFS		
APPROVED	HS		
DE APPR	CP		
DATE	17.12.13		

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. M6061T6S  
TITLE 6061-T6 SHEET/PLATE SPEC

REV. C  
SHEET 1 OF 1  
SCALE NTS

CONFIDENTIAL: THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD  
IT IS TO BE KEPT IN CONFIDENCE AND NOT TO BE DISCLOSED TO ANY OTHER PARTY  
WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD



Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>8/08/07</u>	DATE: _____

Testers located in the Quality Office

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT MATERIAL PER M-DRAWING	Y	AMS 4027
CORRECT THICKNESS	Y	
PHOTO REQUIRED	Y	
CORRECT REF # TO LINK CERT	Y	
CORRECT MATERIAL IDENTIFICATION	Y	MT-D260494
CORRECT # ON THE MATERIAL	Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

MATERIAL: <u>M6061765-040</u>	DATE: <u>8/08/07</u>
MATERIAL CERT REC'D: <u>Yes</u>	QUANTITY RECEIVED: <u>96.5f</u>
QUANTITY INSPECTED: <u>96.5f</u>	QUANTITY REJECTED: <u>0</u>
THICKNESS ORDERED: <u>0.40"</u>	THICKNESS RECEIVED: <u>0.40"</u>
SHEET SIZE ORDERED: <u>4'x12'</u>	SHEET SIZE RECEIVED: <u>4'x12'</u>
PO / BATCH NO.: <u>80040517/5094479</u>	

MATERIAL RECEIPT INSPECTION FORM

3205 100897 Part 18289N

CERTIFIED INSPECTION REPORT

Arconic

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722  
Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material meet the composition limits and that the mechanical properties shown on the face of this sheet. This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.  
Per: *S. N...*

3519110 Ship Date 0 B.I. No. Invoice No. Arconic No. Item  
2018-06-05 11762884 00000 1001007635-1 DPE-07635-1  
P.O. No./Govt Contract No. Customer Arconic Item  
U10855 Lot#: 1

Manufacturing Director - Davenport & Satellite  
Terrence Thoen  
Quality Assurance Manager

Item Description  
0.08" IN TK (+0.0000 - .0045) X 48.0 IN W (+.125 - .125) X 144.0" IN LN (+.15625 - .15625) CAT D 126901 (N) A/T 6061-  
T6/FLAT SHEET FOR DISTRIBUTORS TOLERANCE  
GUARANTEED AMS4027/REV N ANS1H35.2 REV 2017 EXC\_MRK ASME-SB-  
209 REV 15 EXC\_MRK ASTM B209/REV 14  
(MARKED) KRAFT PAPER INTERLEAVED  
MAX GROSS SKID WGT: 4750 LB QUAN TOL +/-  
25 % COR D126901 REV 47 CUST REQ 18-05-  
01 \*\*\* W/E 18-08-04 \*\*\*

Num	Package Ticket	Lot	Weight	Quantity	UOM	Inspector	Clock Numbers
1	476274	369933	3902	75	PC	47397	27908

Notes for COR: D126901.47  
PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS4027 REV N ALSO MEET THE REQUIREMENTS OF AMS-QQ-A-250\_11 ORIGINAL REVISIO N DATED 1997-08-01.

COR: D126901.47 -Specification Limits

Temp	Dir	Max	Min	UTS	TYS	ELAD
T6	Long Transv.	Max	42.0	35.0	10	

Chemical Composition	SI	FE	CU	MN	MG	CR	ZN	TI	Other
Alloy 6061	Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15
Lot: 369933	Min	0.40	0.15	0.8	0.04				REMAIN
	No->	UTS	TYS	ELAD					
Temp	Dir	Test	UTS	TYS	ELAD				
T6	Long Transv.	11	47.6	40.4	13.7				



# CERTIFIED INSPECTION REPORT

Arconic

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet. This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

3519110  
Ship Date 0 B.L. No. Invoice No. Arconic No. Item DPE-07635-1  
2018-06-05 11762884 00000 1001007635-1  
P.O. No./Govt Contract No. Customer Arconic Item  
U10855 Ln#: 1

S. N. M.  
Nandu Schwaben  
Manufacturing Director - Davenport & Savilles

T. M. M.  
Tammara Thom  
Quality Assurance Manager

Page 2 of 2

Lot: 369933 - Mechanical, Physical, Metallurgy, Quantometer Results (cont.) -----

✓48.1	✓40.5	✓13.8						
✓48.1	✓40.5	✓13.9						
✓47.5	✓40	✓13.6						
✓47.5	✓40	✓13.8						
✓47.5	✓40	✓13.7						
✓47.6	✓40.1	✓13.9						
✓47.5	✓40	✓13.7						
✓47.5	✓40.2	✓13.5						
✓47.5	✓40.2	✓13.7						
✓47.6	✓40.4	✓13.7						

Cast Number Chemical - OES SI ✓ FE ✓ CU ✓ MN ✓ WC ✓ CR ✓ ZN ✓ TI ✓ Other Each Other Total  
18P0104011 Actuals 0.63 0.5 0.24 0.01 0.9 0.16 0.01 0.06 < 0.05 < 0.15



This material was melted in the United States or a Qualifying Country [REF DPARS 225.872.1(a)]; it was manufactured in the United States

3205

100897

18289 N

(2)

CERTIFIED INSPECTION REPORT

Arconic

DAVENPORT WORKS 4679 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet. This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

3507369 Ship Date 0 B.L. No. Invoice No. Arconic No. Item DPE--93214-2  
2018-05-22 11745765 00000 1000993214-2  
P.O. No./Govt Contract No. Customer Arconic Item  
C75485 Ln#: 2

S. Mr. N. H.   
Nandu Srivastava   
Manufacturing Director - Davenport & Satellite   
Terrance Thum   
Quality Assurance Manager

Num	Package Ticket	Lot	Weight	Quantity	UOM	Inspector	Clock Numbers
1	476276	369933	3918	75	PC	47397	27908

Item Description  
0.08" IN TK (+0.0000 -.0045) X 48.0 IN W (+.125 -.125) X 144.0 IN LN (+.15625 -.15625) CAT D 126901 (N) A/T 6061-  
T6 PLAT SHEET FOR DISTRIBUTORS TOLERANCE  
GUARANTEED AMS4027 REV N ANS1H35.2 REV 2017 EXC\_MRK ASME-SB-  
209 REV 15 EXC\_MRK ASTM209/REV 14  
(MARKED) KRAFT PAPER INTERLEAVED  
MAX GROSS SKID WGT: 4750 LB QUAN TOL +/-  
25 \* COR D126901 REV 47 CUST REQ 18-04-  
01 \*\*\* W/E 18-04-07 \*\*\*

Notes for COR: D126901.47  
PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS4027 REV N ALSO MEET THE REQUIREMENTS OF AMS-QQ-A-250\_11 ORIGINAL REVISIO N DATED 1997-08-01.

COR: D126901.47 -Specification Limits

Temp Dir	UTS	TYS	ELAD
T6 Long Transv.	KSI	KSI	PCT
Max			
Min	42.0	35.0	10

Chemical Composition										Other	Other
	SI	FE	CU	MN	MG	CR	2N	TI	Each	Total	Aluminum
Alloy 6061	Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15
Lot: 369933	Min	0.40	0.15	0.15	0.8	0.04					REMAIN
	- Mechanical, Physical, Metallography, Quantometer Results										
Temp Dir	No->	UTS	TYS	ELAD							
T6	Test	KSI	KSI	PCT							
		47.6	40.4	13.7							



# CERTIFIED INSPECTION REPORT

Arconic

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet. This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

3507369 Ship Date 0 B.L. No. Invoice No. Arconic No. Item  
2018-05-22 11745765 00000 1000993214-2 DBE-93214-2  
P.O. No./Govt Contract No. Customer Arconic Item  
C75485 Ln#: 2

S. Narasimhan  
Manufacturing Director - Davenport & Satellite

Terrence Thom  
Quality Assurance Manager

Page 2 of 2

Lot: 369933 - Mechanical, Physical, Metallurgy, Quantometer Results (cont.)

48.1	40.5	13.8
47.5	40	13.9
47.5	40	13.6
47.5	40	13.8
47.5	40	13.7
47.6	40.1	13.9
47.5	40	13.7
47.5	40.2	13.5
47.5	40.2	13.7
47.6	40.4	13.7

Cast Number Chemical - OES SI FE CU MN MG CR ZN TI Other Each Other Total  
18P0104011 Actuals 0.63 0.5 0.24 0.01 0.9 0.16 0.01 0.06 0.05 < 0.15

This material was melted in the United States or a Qualifying Country (REF DFARS 225.872.1(a)); it was manufactured in the United States

**SPECIFICATION CONTROL DRAWING**



PURCHASE MATERIAL: 6061-T6/62/651 ALUMINUM SHEET OR PLATE

SPECIFICATION:

QQ-A-250/11 OR AMS-QQ-A-250/11  
OR AMS 4025 OR 4027  
OR ASTM B209



PART NUMBER:

M6061T6S XXX X W.W.W.W  
THK WIDTH

WHERE "XXX" = THICKNESS (IN INCHES)  
AND "W.W.W.W" = WIDTH (IN INCHES, OPTIONAL, FOR SPECIFYING CUT PLATE)

EG. 0.063" THICK SHEET = M6061T6S.063  
EG. 3.5" WIDE BY 0.500" THICK PLATE = M6061T6S.500X3.500



PREFERRED SIZE:

XXX BY 4FT BY 8FT FOR SHEET

RELEASED  
2008 MAR 13  
EJS 18-695

APPROVED

REV.	DESCRIPTION	DATE
C	ADD PLATE AND T651 SPEC	17.12.13
B	REFORMAT DWG. ADD B209 SPEC (2N DB-1), REF PART 08-020A	09.07.13
A	NEW ISSUE	01.06.08
DESIGN	DS	
DRAWN	ML	
CHECKED	NO	
MFG. APPR.	JFS	
APPROVED	HS	
DE APPR.	CP	
DATE	17.12.13	
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWING NO. M6061T6S		
TITLE 6061-T6 SHEET/PLATE SPEC		
REV. C SHEET 1 OF 1		
SCALE NTS		

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6061765.080	DATE: 18/08/07
MATERIAL CERT REC'D: 1/5	QUANTITY RECEIVED: 288 sf
	QUANTITY INSPECTED: 288 sf
	QUANTITY REJECTED: 0
THICKNESS ORDERED: 0.080"	THICKNESS RECEIVED: 0.080"
	SHEET SIZE ORDERED: 4'x12'
	SHEET SIZE RECEIVED: 4'x12'
PO / BATCH NO.: 0040517/5049480	

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y	
CORRECT FINISH	Y	
CORROSION	Y	
CORRECT GRAIN DIRECTION	Y	
CORRECT MATERIAL PER M-DRAWING	Y	AMS 4027; AMS 4027
CORRECT THICKNESS	Y	
PHOTO REQUIRED	Y	
CORRECT REF # TO LINK CERT	Y	
CORRECT MATERIAL IDENTIFICATION	Y	MT: 0368435 D 311714
CORRECT # ON THE MATERIAL	Y	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.				
RECORD RESULTS BELOW				
HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: AT	SIGNED OFF BY:
DATE: 18/08/07	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# CERTIFICATE OF ANALYSIS

Union Drawn Steel II LP

1350 Burlington Street East, P.O. Box 98  
Hamilton, Ontario, Canada L8N 3A2  
Phone: (905) 547-4480; Fax: (905) 544-3852

AC 9678

4/8873

RST-34

5815

DATE 07/21/17 CUSTOMER ORDER NO. NO. DE LA COMMANDE DU CLIENT B 99644 MILL ORDER NO. NO. DE LA MLL 261333-00  
PRODUCT DESCRIPTION PRODUIT DESCRIPTION L 94 FE10329343 YOUR ITEM # : V715412

3/4 RD 1144 20/22 FT

COLD FINISHED STEEL BARS CARBON  
COLD DRAWN & STRESS RELIEF ANNEALED  
"CENTURY" ASTM A311 CLASS B  
STANDARD AISI TOLERANCES  
C .40/.48 MN 1.35/1.65 P .040MAX S .24/.33  
TRANSPORT BY TRUCK - PROTECT WITH TARP  
CHEMICAL & MECHANICAL TEST REPORT REQUIRED  
ASTM A108

COUNTRY OF ORIGIN - CANADA  
HOT ROLL SOURCE : ARCELORMITTAL  
NATA CERTIFIED YES: X  
LADLE ANALYSIS/ANALYSE DE LA COULLEE NO:

HEAT NUMBER C124677

C	.420	MN	1.380	P	.008	S	.258
SI	.200	CU	.030	NI	.020	CR	.020
CB		V	.004	MO	.004	PB	
B		AL	.001	SN	.006		

MECHANICAL PROPERTIES/PROPRIETES MECANQUES

HEAT NUMBER C124677

YIELD STRENGTH LIMIT D'ELASTICITE	108000	P.S.I. @ .2% OFFSET
TENSILE STRENGTH RESISTANCE A LA TRACTION	132000	P.S.I.
ELONGATION (2 INCHES) REDUCTION OF AREA STRICTION	30.000 %	
HARDNESS DURETE	241 HB	

☐ MAG TEST ☒ ROTO TEST ☐ ULTRA SONIC TEST

NO WELDING OR WELD REPAIR PERFORMED ON THIS MATERIAL.  
THIS MATERIAL WAS NOT EXPOSED TO MERCURY DURING  
PROCESSING OR WHILE IN OUR POSSESSION.

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HAS BEEN TESTED IN ACCORDANCE  
WITH SPECIFICATION, AND THAT THE RESULTS ARE CORRECT AS CONTAINED IN  
RECORDS OF THE COMPANY.  
PAR LES PRESENTES NOUS CERTIFIONS QUE LA MATIERE DECRIE A ETE TESTE  
CONFORMEMENT AUX SPECIFICATIONS ET QUE LES RESULTATS SONT CORRECTS. COI  
INDIQUE DANS LES REPERTOIRES DE LA COMPAGNIE.

REV.	DESCRIPTION	DATE	BY	APPROVED
A	NEW ISSUE	17.08.09	VM	WM

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR  
 SPECIFICATION: ASTM A311 or UNS G11440  
 PART NUMBER: MT-1144-R ID.DDD  
 WHERE "D.DDD" = DIAMETER IN INCHES  
 EG. 5/8" ROUND BAR = MT-1144-R0.625

<b>DART</b> AEROSPACE		Hamletbury, Ontario, Canada	
TITLE AISI 1144 STRESSPROOF STEEL ROUND BAR			
ORDER NO.	MT-1144-R	REV.	A
DESIGNER:	VM 08/02/2017	CHK:	1. 008 FRACTIONS & 1/8"
DRAWN BY:	VM 08/03/2017	APP:	2. 1/8" ANGLES & 1/4"
CHECKED:	SC 08/03/2017	3. DIMENSIONS ARE IN INCHES	
WEL. APPR:	DP 08/03/2017	4. UNLESS OTHERWISE SPECIFIED	
QA APPR:	PD 08/03/2017	5. ASME Y14.2009	
APPROVED:	VM 09/05/2017	6. DIMENSIONS SHALL APPLY	
DATE:	08/31/2017	SCALE:	N.T.S. WEIGHT: 0 LBS
COPYRIGHT © 2013 BY DART AEROSPACE LTD		SHEET 1 OF 1	

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MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M7-1144-K0.750

DATE: 18/08/01

MATERIAL CERT REC'D: ☒

QUANTITY RECEIVED: 21'

QUANTITY INSPECTED: 21'

QUANTITY REJECTED: 0

PO / BATCH NO.: P0040517/5098044

THICKNESS ORDERED: 0.750"

THICKNESS RECEIVED: 0.750"

SHEET SIZE ORDERED: —

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS	SURFACE DAMAGE	Y	N
			CORRECT FINISH	Y	N
			CORROSION	Y	N
			CORRECT GRAIN DIRECTION	Y	N
			CORRECT MATERIAL PER M-DRAWING	Y	N
		ASTM A311	CORRECT THICKNESS	Y	N
			PICTO REQUIRED	Y	N
			CORRECT REF # TO LINK CERT	Y	N
		HT: C124677	CORRECT MATERIAL IDENTIFICATION	Y	N
			CORRECT M# ON THE MATERIAL	Y	N
			DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	N
			DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N